

STOLEN AMAZON: THE ROOTS OF ENVIRONMENTAL CRIME IN THE TRI-BORDER REGIONS

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“Mapping Environmental Crime in the Amazon Basin”: Introduction to the Series

The “Mapping Environmental Crime in the Amazon Basin” Case Study Series seeks to understand the contemporary dynamics of environmental crime in the Amazon Basin and generate policy recommendations for key stakeholders involved in combating environmental crime at the regional, national, and local levels.

The Amazon Basin sprawls across eight countries (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela) and one territory (French Guiana). In recent years, the research and policy communities have made significant progress in developing a solid understanding of the dynamics of deforestation and degradation in the region. They have also gained insights into how economic actors exploit forest resources under various state regimes. This series sheds light on a less explored dimension of the phenomenon: the role played by illicit actors and economies in fueling deforestation.

This series of studies draws a complex picture of the continuous socio-environmental impact of authorized and/or licit economic activities on the Amazon forest and its people. It reveals the spatial and temporal dynamics of specific categories of environmental crime and their intersection with legalized economic activities, as well as their linkages with other types of crimes and social violence. It also sheds light on the

underlying political economy of criminal markets, the organizational characteristics of crime groups, and government agencies’ collusion in environmental crimes. The reports also discuss the record of past and current governmental measures to disrupt and dismantle criminal networks that have diversified into environmental crime across the Amazon Basin.

Studies under this series illustrate how, in different countries in the Amazon Basin, both licit and illicit actors interact and fuel environmental crime and degradation in a time of climate emergency and of accelerated socio-political change across the region. Meanwhile, State’s attention and action to combat environmental crime in recent years, mainly to reduce deforestation and illegal mining, is stymied by the weakening of environmental protections and land regulations. More often than not, political and economic elites are either complicit in or oblivious to the destruction of the Amazon forest.

This series is led by the Igarapé Institute, an independent think and do tank headquartered in Rio de Janeiro and working on solutions for the public, climate and digital security agendas, in partnership with InSight Crime, a non-for-profit organization conducting on-the-ground-reporting, research and investigations on issues related to organized crime in Latin American and the Caribbean.

STOLEN AMAZON: THE ROOTS OF ENVIRONMENTAL CRIME IN THE TRI-BORDER REGIONS

This report was led by InSight Crime. The findings and analysis of this report are based on desk-top research, phone interviews, and fieldwork in the border regions across Colombia, Venezuela, Peru and Brazil, in the municipalities of Puerto Carreño, Inírida, and Leticia, in the Colombian departments of Vichada, Guainía, and Amazonas, respectively. In the city of Puerto Ayacucho, in the Venezuelan Amazonas state, and the cities of Tabatinga, in the Brazilian Amazonas State, the town of Santa Rosa de Yavari, and the Yavari Valley, in the Peruvian department of Loreto. The interviews were conducted in 2022 with environmental crime experts, government and security officials, members of local communities, farmers, and members of international organizations.¹

The report examines environmental crime dynamics in two tri-border regions: Brazil, Colombia and Venezuela, and Brazil, Peru and Colombia. Across the world, border zones are known as sites of intense circulation of people and goods. In Latin America, borders are also deeply connected to multiple forms of trafficking. Amazon's tri-border regions are important areas to be investigated on their own due to their central role in criminal supply chains of forest goods. Beyond the official narrowly defined border zones or bordering cities, we look at these tri-borders more widely as frontier regions that span over thousands of square kilometers while still deeply connected to trans-national dynamics: routes, flows of goods and people, business practices, and criminal networks.

Unlike other border zones in the region, Amazon borders are extremely remote areas, logistically challenging to access and often very distant from other major political and economic

hubs. Beyond the thick jungle and its countless rivers, both tri-border regions are home to incomparable natural wealth. The triple border between Venezuela, Brazil and Colombia is the only place in the world where tepuis are found, gigantic plateaus that hide minerals such as gold and diamonds, while the triple border between Brazil, Colombia and Peru is home to valuable woods such as mahogany and cedar. These regions are historically home to several Indigenous communities, featuring, at the same time, very weak presence from state institutions and infrastructure.

Once remote areas, protected due to their inaccessibility, these two tri-border regions are pivotal to contemporary forms of transboundary environmental crime. For more than 20 years, the river arteries that harmoniously connect these countries have served for the movement of drugs from Colombia and Peru, the largest cocaine producers, to Brazil, one of the main gateways for drugs to international markets. This criminal infrastructure today has been put at the service of illegal mining and timber trafficking. On these borders powerful criminal actors meet. Colombian guerrillas have taken refuge on these borders. In Venezuela they have swelled their ranks with Venezuelan recruits.

Besides offering a unique account of the specific crime dynamics taking place in these border regions, and the heavy toll they take on local communities, in particular Indigenous communities, the study highlights the major challenges to fight environmental crime in tri-border regions is hindered by lack of resources, expertise, corruption as well as insufficient cross-country articulation.

Index

Executive Summary	5
Illegal Gold Mining	10
Gold and Guerrillas: Venezuela's Yapacana National Park	16
Illegal Gold Rush Draws Criminal Groups to Brazil's Yanomami Reserve.....	20
Timber Trafficking	30
Coca and Drug Trafficking	35
State Resilience	45
Conclusions and Opportunities for Intervention.....	54
End notes	57

Executive Summary

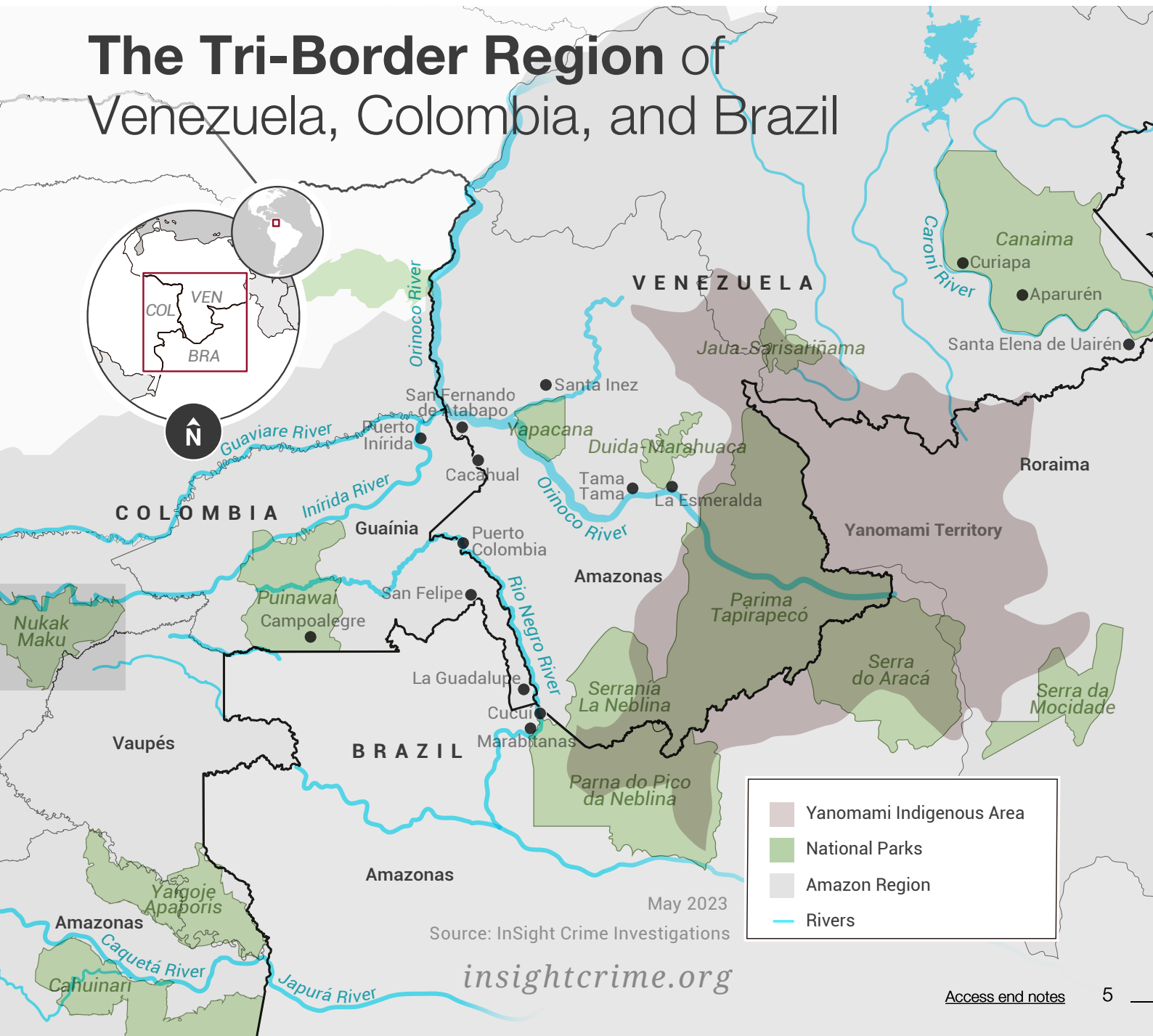
Deep in the heart of the Amazon basin lie two tri-border regions, where environmental crimes and their perpetrators recognize no national boundaries. In these vast jungle areas, isolated stretches of critical primary forests are being razed to mine gold, grow coca, and harvest timber.

At Brazil's northern border with Colombia and Venezuela, which extends for nearly 4,000

kilometers and is largely accessible only by boat and light aircraft, prospectors are in a mad scramble to unearth gold.

Tens of thousands of them have invaded the territory of the Indigenous Yanomami people, who inhabit large swath of land across parts of Brazil and Venezuela.² The miners have scarred the earth and left mud pits across the Yanomami reserve.

The Tri-Border Region of Venezuela, Colombia, and Brazil



In Venezuela's Yapacana National Park, slightly north of this tri-border zone, illegal gold mining has grown with "remarkable" speed and intensity, according to SOS Orinoco, a watchdog group.³ Illegal prospectors have even razed forest atop Cerro Yapacana, a sheer-walled mountain that soars over the park.⁴



Satellite image of deforestation on and around Cerro Yapacana (Courtesy of SOS Orinoco)

"In the region, everything depends on gold," a mining expert in the Venezuelan Amazon told InSight Crime, speaking on the condition of anonymity out of fear of retaliation.⁵ "The activity on Cerro Yapacana never stops. They are extracting gold all the time."

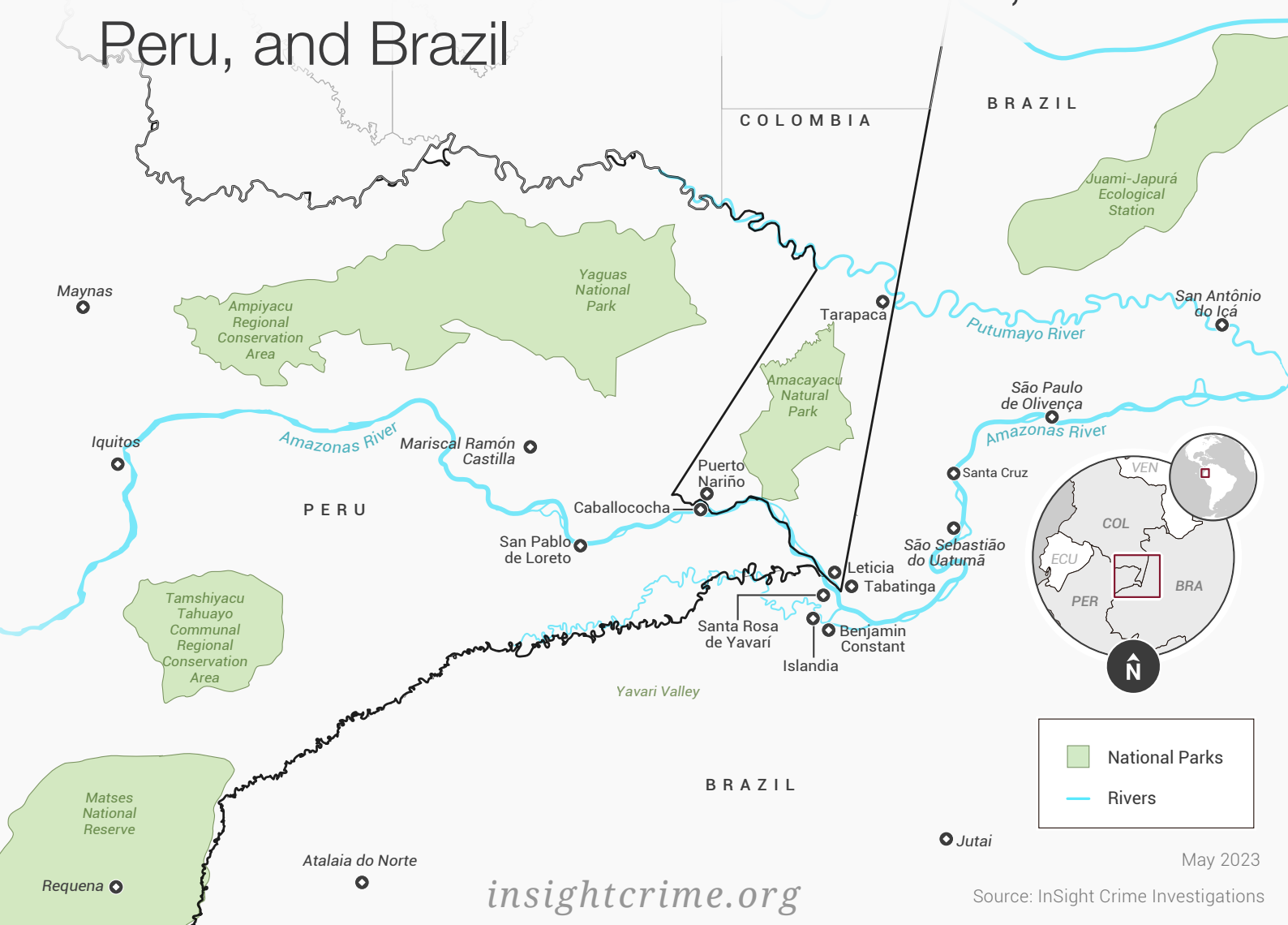
At the other tri-border, where Brazil, Colombia, and Peru meet, criminal actors and illicit economies flow and merge like the region's many rivers.

In a northeastern corner of Peru, Amazon forest is being felled to grow coca.⁶ From jungle

processing sites there, cocaine is smuggled to Colombia and then to Brazil, where the drugs can be dispatched throughout the region's largest country to feed local consumption, and then onto Europe and beyond.⁷

Three rivers -- the Caquetá (known in Brazil as the Japurá), the Putumayo, and the Amazonas -- and their many tributaries serve as arteries for this cross-border trafficking. The shared waterways are also highways for timber cut by illegal loggers, where gold dredges are operated by illegal miners.

The Tri-Border Across Colombia, Peru, and Brazil



insightcrime.org

Source: InSight Crime Investigations

The nexus of drug and environmental crime in these two Amazon's tri-border regions has brought together a volatile mix of criminal actors to a wilderness where the presence of law enforcement and the state are minimal. What little order that exists is often imposed at gunpoint by criminal groups.⁸

In Colombia's large and mostly unpatrolled Amazonas department, whole Indigenous communities have been held hostage.

"I have never seen such fear of violence due to such a presence of armed illegal groups," said a humanitarian official who works with Indigenous communities in Amazonas and asked to not be identified for safety reasons.⁹

Since 2019 Indigenous communities are not only caught in the crosshairs of criminal violence, but increasingly depend on criminal enterprises for their livelihoods. Processing coca, harvesting illegal timber, and serving as labor on gold-dredging rafts are some of the few employment opportunities in these remote regions.¹⁰ Some participants are youths with little say in the matter.

Indigenous communities are also being exposed to high levels of toxic mercury, used by the miners to separate gold. Traces of mercury are contaminating rivers and forests.

These same communities have historically been devoted guardians and front-line defenders of

these forests and waterways, with a vested interest in protecting their biodiverse homelands. Listening to the needs of these communities, providing them funding, alternative livelihood opportunities, and finding ways to bring them security are all necessary steps in tackling the array of crimes stoking deforestation in these two Amazon tri-border regions.

Wider policy options also are needed, including cooperation among regional representatives of all the tri-border countries, satellite, and aerial

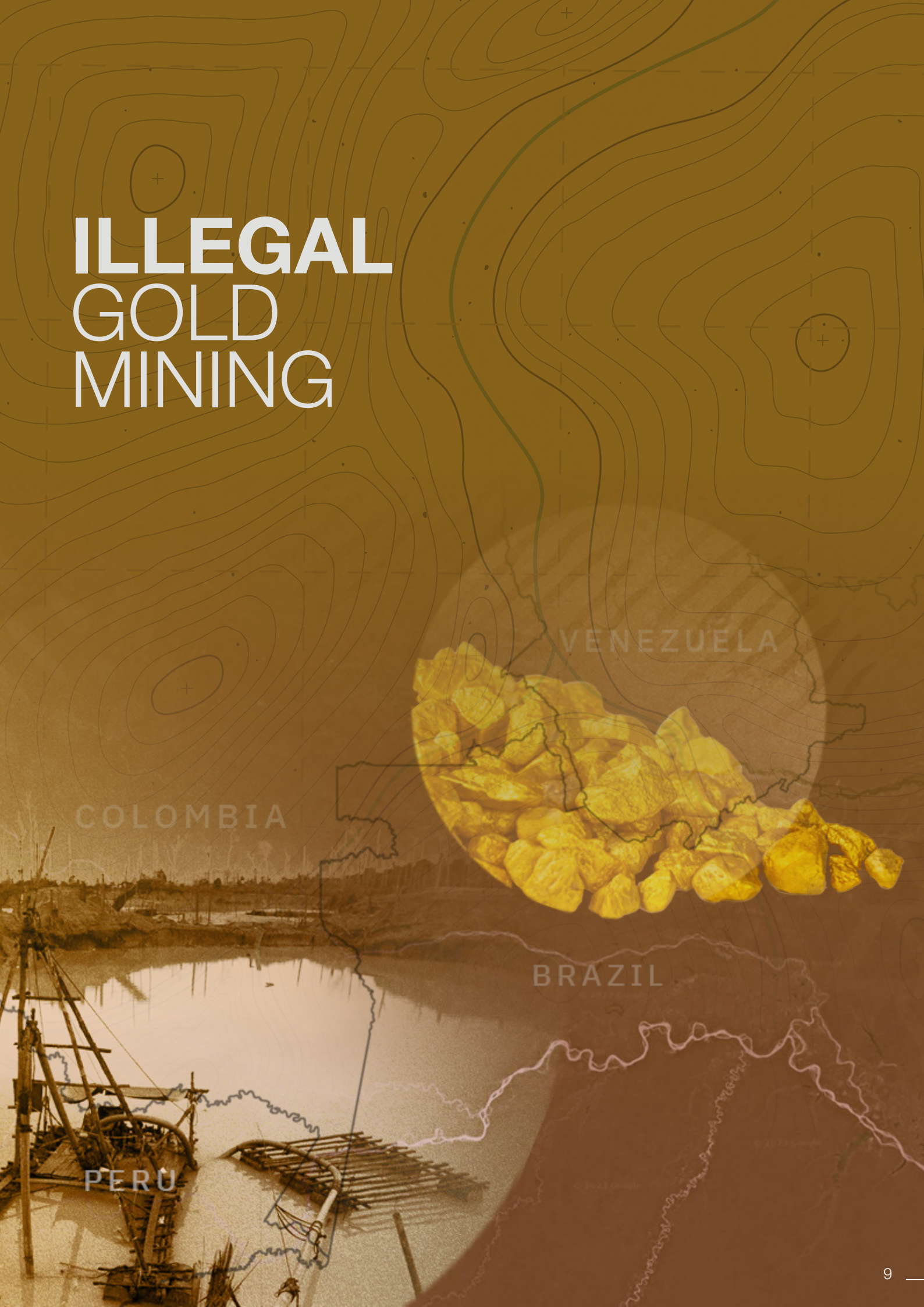
imaging to monitor forests, increased vigilance over reserves and parklands, and enforcement of the environmental protection laws and treaties that currently exist. Enormous political will is required.

Although the remoteness of both triple borders has shielded them, in part, from suffering the extensive deforestation that has affected other regions of the Amazon, the seeds of future destruction in these critical regions of the triple border are already being sown.



Deforestation in the department of Guainía, Inírida, Colombia, March 2022. Photograph by Luisa Acosta, InSight Crime

ILLEGAL GOLD MINING



ILLEGAL GOLD MINING

Illegal mining is by far the most widespread and insidious environmental crime occurring in the Amazon's tri-border regions.

In the early 1980s, prospectors began ravaging Amazon's tri-border lands in search of gold.¹¹ Since then, poor, desperate people and Indigenous communities have become a ready labor force for prospectors. They work for sophisticated and structured illegal mining operations that provide them digging and dredging machinery and pay them in small amounts of gold.

On the Colombian and Venezuelan sides, mining activities and businesses that have sprung up around the sites are taxed by criminals, ranging from a few gunmen to factions of Non-State Armed Groups (NSAGs). The latter include the ex-FARC,¹² made up of dissident groups of the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia – FARC), which demobilized in 2017, and units from Colombia's last remaining guerrilla force, the National Liberation Army (Ejército de Liberación Nacional – ELN).¹³ Brazil's most powerful mafia, the First Capital Command (Primeiro Comando da Capital – PCC),¹⁴ also appears to be making inroads into the illegal gold trade.¹⁵

An extensive entrepreneurial criminal network launders the gold. Using fleets of small planes, air transport companies shuttle supplies in and gold out. In Brazil, owners of these firms have come under investigation for actively facilitating illegal mining and laundering gold.¹⁶

In Colombia and Brazil, traders openly buy illegal gold, from individual prospectors up to owners of mining operations. Businessmen with webs of companies profit up and down the illegal gold chain.

When the gold is ultimately smelted, its illegal origins melt away.

Dredging Rafts Invade Colombia's Rivers

The densely forested banks of the rivers that cut through Brazil and Colombia echo with the rumble of “dragons,” huge dredging rafts that suck up riverbeds through industrial hoses to capture gold particles.¹⁷

Brazilian miners motor around freely in this remote Amazon region.¹⁸ According to a Colombian military official, the dredging rafts are mostly constructed on the Brazil side of the border, where they operate largely unchecked.¹⁹

Along a bend in the Puré River, which runs from Colombia into Brazil, the roof of one dragon is easily spotted in an aerial photo. So are the effects of its constant dredging. On one side of the raft, the river is glassy. On the other, it is turbid.²⁰ What cannot be seen are the effects of the poisonous mercury, used to separate gold, that has washed back into this environment.²¹

Gold dredging rafts first invaded Colombia's Amazon in the early 2000s, when they were seen along the Caquetá River, which becomes the Japurá River in Brazil. A decade later, their reach had extended well down the Putumayo River, further south.²²



A dredging raft in the Pureté River at the tri-border (Courtesy of National Army of Colombia).



In September 2022, the Colombian military destroyed four dredging rafts on the Pureté River, which runs from Brazil into Colombia's Tarapacá region (Courtesy of National Army of Colombia).

In recent years, dredges manned by illegal miners have ramped up operations in this Amazon border region, particularly in Tarapacá.²³ The Colombian region, which abuts Peru and Brazil, has become a gold mining hotspot thanks to the many rivers running through it. The Putumayo River crosses Tarapacá's southern edge, while the Cotuhé River intersects with the Putumayo there. At Tarapacá's northeastern corner, the Puré River passes from Colombia into Brazil.

The Puré River had the highest incidence of illegal gold mining out of ten rivers analyzed in 2021 by the United Nations Office on Drugs and Crime (UNODC) and Colombia's Ministry of Mines and Energy (Ministerio de Minas y Energía).²⁴ Portions of the Putumayo and Cotuhé rivers in Tarapacá also showed considerable activity last year, according to the UNODC report.²⁵

The illegal dredging rafts from Brazil took advantage of reduced military patrols during the COVID-19 pandemic to make incursions into the region, according to government officials and Indigenous activists working in Colombia's Amazonas department. Jhon Fredy Valencia, agricultural and environmental secretary for the Amazonas department, said illegal mining has increased markedly over the last few years.²⁶

Valencia and the Colombian military official explained that tackling illegal mining in the tri-border is extremely difficult. To get to the Puré River, for example, security officers have two options. The first is to cross the river on a tour that lasts six days from Leticia. This includes entering Brazilian territory, which due to territorial sovereignty issues requires high-level coordination between the military and the foreign ministry of both countries. The other option is to arrive by helicopter, but this alerts the miners and truncates the effectiveness of the operations.²⁷

"The miners work with rafts that move easily through the rivers and, when military operations are carried out in one place, they simply cross the border," Valencia said.²⁸

From Dredging Rafts to Dragons

Most dredging rafts are constructed atop planks or logs. Each holds a gas motor, sometimes from an old tractor trailer, and a hose some 8 inches in diameter, or about the size of a soccer ball. The hose sucks up mud from the riverbed. The drawn-up mud is then pushed toward a sluice, which collects sediment and gold particles as the slurry runs back into the river.²⁹

The rafts cost between \$8,000 to \$10,000 to construct and can produce up to 40 grams of gold per day.³⁰ That amount can be sold locally for \$400 to \$600, and is worth up to \$2,000 on the international market. This type of river mining, though, cannot be conducted year-round due to changing water levels.³¹

The so-called dragons are the largest type of raft. They often have multiple stories and carry equipment that is vastly larger, heavier, and more expensive than the small rafts' gear.³² These include motors of 60 horsepower and multiple hoses with diameters up to 15 inches.³³ The biggest dragons, constructed of both wood and metal to handle such equipment, cost some \$45,000 to build, according to multiple law enforcement sources.³⁴

Brazilians appear to be the main operators of the rafts. Antonio Torres, Brazil's diplomatic consul in Leticia, said in August 2022 that three Brazilian nationals, two men and a woman, were jailed on charges of illegal mining.³⁵ In a September 2022 operation on the Puré river, Colombian authorities arrested six Brazilian nationals.³⁶

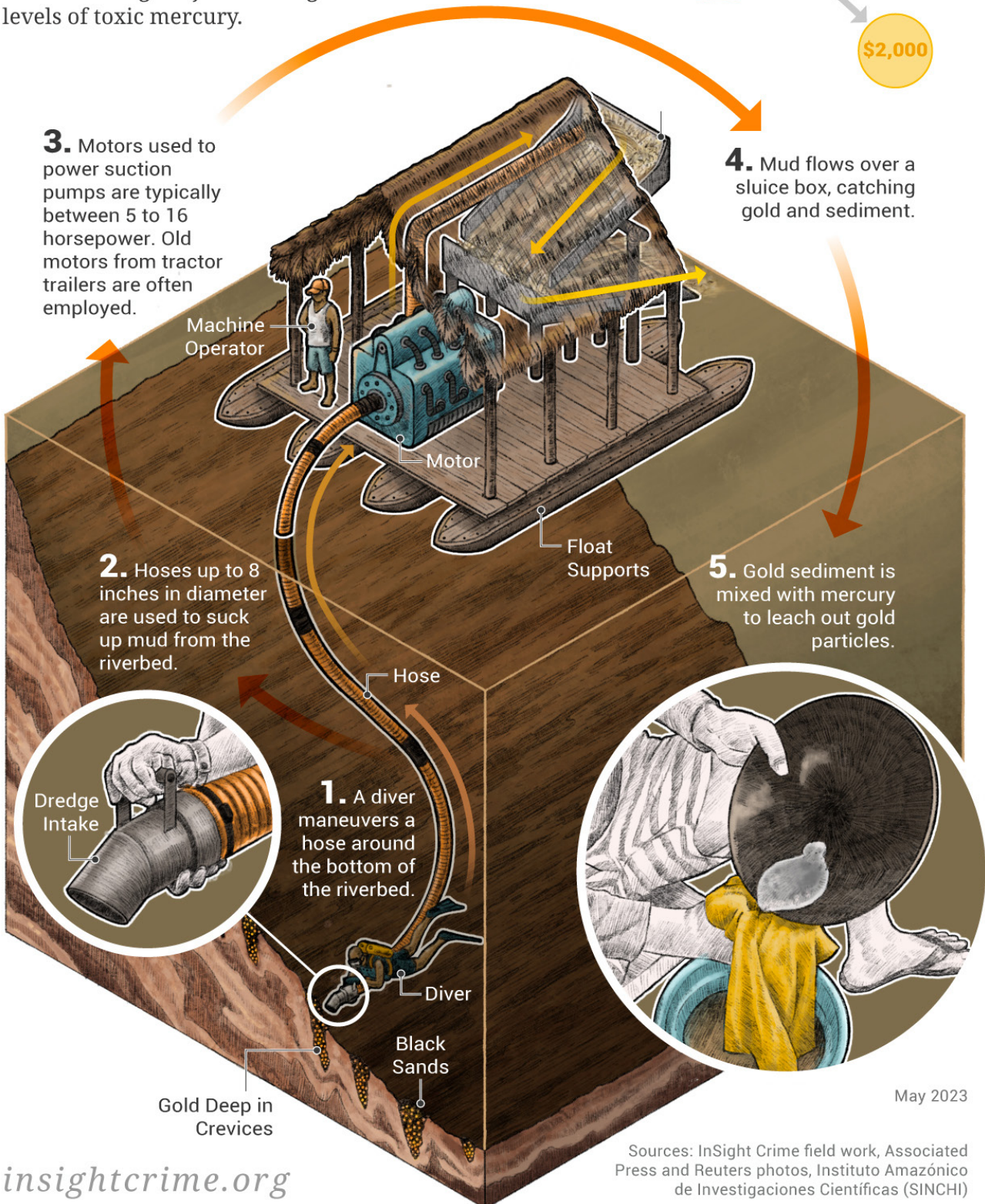
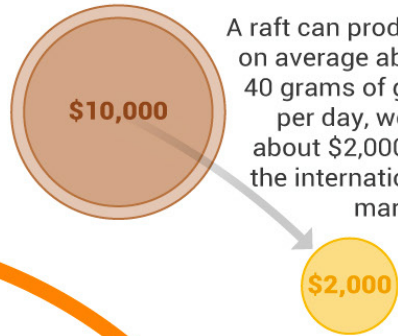
Colombians are involved as well. For example, a 2020 interdiction of ten dredging rafts on the Puré river led to the arrest of three people, two Brazilian nationals and a Colombian.³⁷

How a Typical Dredging Raft Works

Dredging rafts operated by illegal miners are invading Amazon waterways shared by Colombia and Brazil. The gold rush is devastating for Indigenous people, who are being subjected to high levels of toxic mercury.

A dredging raft costs between 35 and 45 million Colombian pesos (about \$10,000) to construct.

A raft can produce on average about 40 grams of gold per day, worth about \$2,000 on the international market.



May 2023

Sources: InSight Crime field work, Associated Press and Reuters photos, Instituto Amazónico de Investigaciones Científicas (SINCHI)

Brazil took little action against illegal mining during Jair Bolsonaro's tenure (2019-2022). While Brazilian authorities did destroy some heavy machinery,³⁸ their efforts paled in comparison to the environmental havoc caused by illegal miners, who Bolsonaro emboldened with his permissive extractive agenda.³⁹ However, with former President Luiz Inácio Lula da Silva returning, Brazil's stance against illegal mining has taken another turn. Since February 2023, Brazilian security forces have been carrying out operations to expel illegal miners, mostly from Yanomami lands, and destroy their machinery.⁴⁰

Colombian authorities have had some success interdicting and destroying dredging rafts in the region. In 2021, they destroyed several illegal dredging rafts on the Puré, said José Reinaldo Mucca, director of Indigenous affairs in Colombia's Amazonas department.⁴¹ In September 2022, the military interdicted and destroyed four dredging rafts on the Pureté River, which runs from Brazil into Colombia in the Tarapacá region.

The dragons, because of their size and their constant churning up of the riverbeds, are the easiest dredges to spot from the air. In their efforts to conceal them, illegal gold miners have painted roofs green and navigate them close to riverbanks. The operators have frequently sunk their own dredges to avoid interdiction efforts.⁴²

However, the Colombian government does not have adequate resources for constant patrols and law enforcement, or to man military outposts in the jungle. Miners have thwarted aerial surveillance and interdiction attempts by monitoring the operations and crossing into Brazil or Peru when they detect Colombian authorities.⁴³ This, coupled with geographical difficulties and coordination challenges between the three countries, makes stopping illegal mining a daunting task.

Illegal Mining Attracts Spate of Criminal Actors

Given the cost of constructing the rafts, the miners themselves are likely receiving backing from illegal gold financiers in either Brazil or Colombia. A single raft can accumulate over 14 kilograms (494 ounces) of gold a year, which can be sold for between \$150,000 and \$200,000 locally and is worth about \$877,000, based on the international price of an ounce of gold in 2022.⁴⁴

Gold is processed weekly on the rivers and moved to Brazil.⁴⁵ Once there, it is easily mixed with gold from other sources and then laundered. Colombian buyers also purchase nuggets directly from the rafts and move the gold through Colombian markets.⁴⁶

In Colombia's Amazonas department, illegal mining appears to be partly controlled by armed groups. In Tarapacá, a group known as Los Comandos de la Frontera, or Border Command (to be discussed in the drug trafficking section of this report) exerts outside influence and is likely overseeing illegal mining.⁴⁷

The human rights official who provides aid in Colombia's Amazonas department said that the Border Command profits not only from drug trafficking but also illegal mining.⁴⁸ Mucca, the Indigenous affairs official, agreed that the group is likely involved in both activities.⁴⁹ The six Brazilians arrested on the Pureté in September 2022 were in "service" of the Border Command, Gen. Jaime Galindo, the commander of the Army's Sixth Division, told the media.

"From the Cotuhé and above, it's a mafia," Mucca said.

Effects of Illegal Mining on Indigenous Communities

Indigenous communities, who are the first line of defense against illegal mining preying on the Amazon, have become the target of threats and attacks from mining networks.

The presence of mining actors in their territories has left Indigenous communities with no choice but to comply with mining operations. This generates all types of difficulties for the communities, including violence, said a representative of the National Organization of Indigenous peoples of the Colombian Amazon (Organización Nacional de los Pueblos Indígenas de la Amazonía Colombiana – OPIAC).

“In some mining sectors we have allegations about the killing of Indigenous leaders, and disappearances of some leaders,” he said.⁵⁰

The few economic opportunities at the tri-borders mean some local communities have struggled to resist the incursions of illegal mining. Youths are often employed as divers who move hoses around riverbeds. Women serve as cooks, and men as mining operators. They are paid in cash or in coupons that can be used to redeem items from certain stores in Tarapacá.⁵¹

Indigenous leaders, or caciques, in some of Colombian Amazonas’ communities have made deals with prospectors, according to Mucca, the Indigenous affairs official.⁵² In Tarapacá, for example, some Indigenous elders were paid 3 million pesos (about \$680) for allowing illegal mining rafts to pour into their waterways.

Mining is often conducted by illegal groups backed by *patrones*, or bosses,⁵³ who have the financial capacity to bring expensive equipment to these territories, said the representative of the OPIAC.⁵⁴

Illegal Mining has also brought health hazards. Gold-containing sediment is mixed with mercury to extract the gold, usually close to waterways or even on the rafts themselves. Some of the leftover mercury gets washed back into the waterways.

According to a 2018 study of mercury contamination in Colombia’s Amazon, high levels were discovered in hair samples of people in Tarapacá’s Indigenous communities.⁵⁵ Of the nine communities tested, all were at least double the threshold considered safe by the World Health Organization (a daily intake of 1.6 parts per million), and four had levels at least seven times above that limit. Today’s levels are almost certain to be higher.

Mercury poisoning can impair children’s development, damaging the brain and other parts of the nervous system. Mercury can also be toxic to adults, causing brain and kidney damage, blindness, and heart disease.⁵⁶

Government, health, and justice officials have held meetings with Indigenous communities to discuss issues of mercury, according to Valencia, the Colombian Amazonas government official.

“It’s not only an issue of going to them and saying there is a problem,” he said. “We also need to provide them with solutions,” including medical attention for those affected.

GOLD AND GUERRILLAS: VENEZUELA'S YAPACANA NATIONAL PARK

Mud pits mark illegal gold mining sites in Venezuela's Yapacana National Park, home to towering flat-topped mountains and plunging waterfalls. Inside a moon-like crater, dead trees are scattered like twigs, a video shows.⁵⁷

Yapacana National Park sits in southwest Venezuela, near the Colombia border.⁵⁸ According to a 2019 report by SOS Orinoco, mining operations in the reserve increased from about 220 hectares in 2010 to more than 2,000 hectares in 2018, equal to about 1,500 soccer fields.⁵⁹ The following year, mining operations destroyed an additional 200 hectares, and sites jumped from 36 in 2018 to 69 in 2019, according to the organization.⁶⁰

Venezuela has the second-highest number of illegal mines among the Amazon countries, surpassed only by the much larger country of Brazil.⁶¹ Of 4,472 illegal mining sites throughout the region, at least 1,423 are in the Venezuelan Amazon, according to the Amazon Network of Georeferenced Socio-Environmental Information (Red Amazónica de Información Socioambiental Georreferenciada – RAISG).⁶² And Yapacana is the largest and least regulated mining area” in its entire Orinoco-Amazon region, stated SOS Orinoco, the illegal mining watchdog group.⁶³

The spreading mines have left denuded lands across the park, which is larger than the country of Luxembourg.

Venezuelan journalist and political activist Luis Alejandro Acosta, who is based in Venezuela's Amazonas state and has traveled to Cerro Yapacana, said sites can have up to 10 backhoes working on them at once.⁶⁴

“Production there never stops,” he said. “Day and night.”

A Gold Mine for the Ex-FARC Mafia

Venezuela President Nicolás Maduro has turned to the sale of illegal gold to prop up his regime in the face of sanctions and massive declines in oil wealth.⁶⁵

Colombian guerrillas oversee much of the gold rush across Yapacana National Park.⁶⁶ Maduro's predecessor, the late Hugo Chávez, first ceded the park to FARC rebels in the early 2000s, according to Acosta.⁶⁷

Chávez granted the guerillas sanctuary along much of the border region. He saw the rebel force as a strategic tool in the wake of a United States-supported coup in April 2002, which briefly toppled him from power. Granting the FARC safe haven also served as a bulwark against an increasingly hostile Colombia, the region's key US ally.⁶⁸

Today, Venezuela is not only a refuge for guerrillas. The ex-FARC have spread deep into Venezuelan territory, taking control of communities and criminal economies. And what used to be a Colombian guerrilla is today a binational group.⁶⁹

Ex-FARC Acacio Medina Front Network

insightcrime.org

The dissident Acacio Medina Front headed by **Miguel Díaz Sanmartín, alias Julián Chollo**, controls illegal gold mining on Cerro Yapacana. There, the group has machines, extracts gold, and imposes extortion fees on mining.

Mid-level commanders:

These figures solve the simplest problems of the community and are in charge of collecting extortion fees in the area.

Militia members:

They are in charge of intelligence and logistics tasks, such as supplying the Cerro Yapacana with food, fuel, etc.

Local communities:

Under the threat of violence, allow for the passage of miners and mining equipment.

ELN: The Acacio Front has a pact of non-aggression and division of territories with the ELN Daniel Pérez Front, which is responsible above all for controlling the ports in the area and extortion there.

Venezuelan security forces: They allow the presence of the ex-FARC Acacio Medina Front and in exchange, they receive part of the extortion loot.

Miners: Must pay a fee to Julián Chollo to extract gold on the Cerro Yapacana. They then sell the gold in Inírida, the capital of Colombia's Guainía department."



June 2022

Source: InSight Crime Field Investigations

Back in the early 2000s, the tri-border provided critical drug smuggling opportunities for the FARC's Eastern Bloc and its 16th Front.⁷⁰ Up to 20 tons of cocaine a month were exported by the 16th Front to Brazilian drug trafficker Luiz Fernando da Costa, alias "Fernandinho Beira-Mar," or "Fredy Seashore." FARC commander Géner García Molina, alias "Jhon 40," controlled drug smuggling in the region, handling up to 100 tons of cocaine per year while developing a penchant for horses and Rolex watches.⁷¹

At that time, the FARC paid little attention to the gold in Yapacana, though illegal mining had been occurring sporadically there since the 1980s.⁷² According to Acosta, the guerrillas only began to extort miners as a revenue ploy in about 2010.⁷³

When the FARC came to a peace agreement in 2016, Jhon 40 and Miguel Díaz Sanmartín, alias "Julián Chollo," were among the first rebels who refused to surrender. Instead, they formed the ex-FARC's Acacio Medina Front -- composed of former members of the 16th Front -- in the border area where Colombia's Guainía department and Venezuela's Amazonas state meet.⁷⁴

Julián Chollo -- described as a "lone wolf" who joined the FARC at the age of 20 -- now controls the Yapacana region, widely taxing employees of illegal mining operations.⁷⁵

Tens of thousands of miners have flocked to Yapacana to dig for gold. About 25,000 people are present there daily, though not all of them are miners. Some work in the camps as cooks, drivers, and vendors, Acosta said.⁷⁶

Chollo charges them precise fees: 5 grams of gold for each backhoe in operation, 3 grams to maintain a business, 1 gram per boat bringing in miners and supplies, and so on.⁷⁷

"That is a lot of gold collected every 15 days," Acosta said. Meanwhile, the largest mines and machines, "those that extract the most gold," belong to the guerrillas, he added.⁷⁸

An Indigenous community leader from the region who asked to speak anonymously out of fear of reprisals agreed that the ex-FARC have total command of Yapacana.⁷⁹ Elders have made deals with the guerrillas, receiving motors, farming tools, and other items from them in exchange for control of their territories, the community leader said.⁸⁰

For some of the Indigenous, Chollo is like "a Robin Hood," the Indigenous leader said. "If there is someone who wants to buy an iron, he gives it to them. And with that, the community has been bought off," he said.⁸¹

Communities also face menacing violence.

"They invade our spaces by threatening us," said another Indigenous leader who also asked for anonymity.⁸² "We are submissive to them, and they are the ones who rule, who set the laws."

Mining Supply Lines Taxed by ELN

The Orinoco River and its tributaries serve as throughways to Yapacana. About 75 kilometers upriver on the Orinoco sits San Fernando de Atabapo, a Venezuelan border town where gold is the principal currency. Food and alcohol are bought with *rayas*, or "lines," which are small amounts of gold worth about \$3.⁸³ Gold is also bartered for larger items, such as appliances.⁸⁴

Colombia's river town of Inírida, about 25 kilometers west of San Fernando de Atabapo on the Guaviare, serves as a transport hub. From there, large raft boats begin a two-day journey to Yapacana, carrying machinery, fuel, and other supplies. To haul 20 tons costs about \$1,000, Acosta said.⁸⁵

Units from Colombia's ELN guerrilla force charge fees for boats to pass. More than 50 of such control points exist, according to an Indigenous community member.⁸⁶

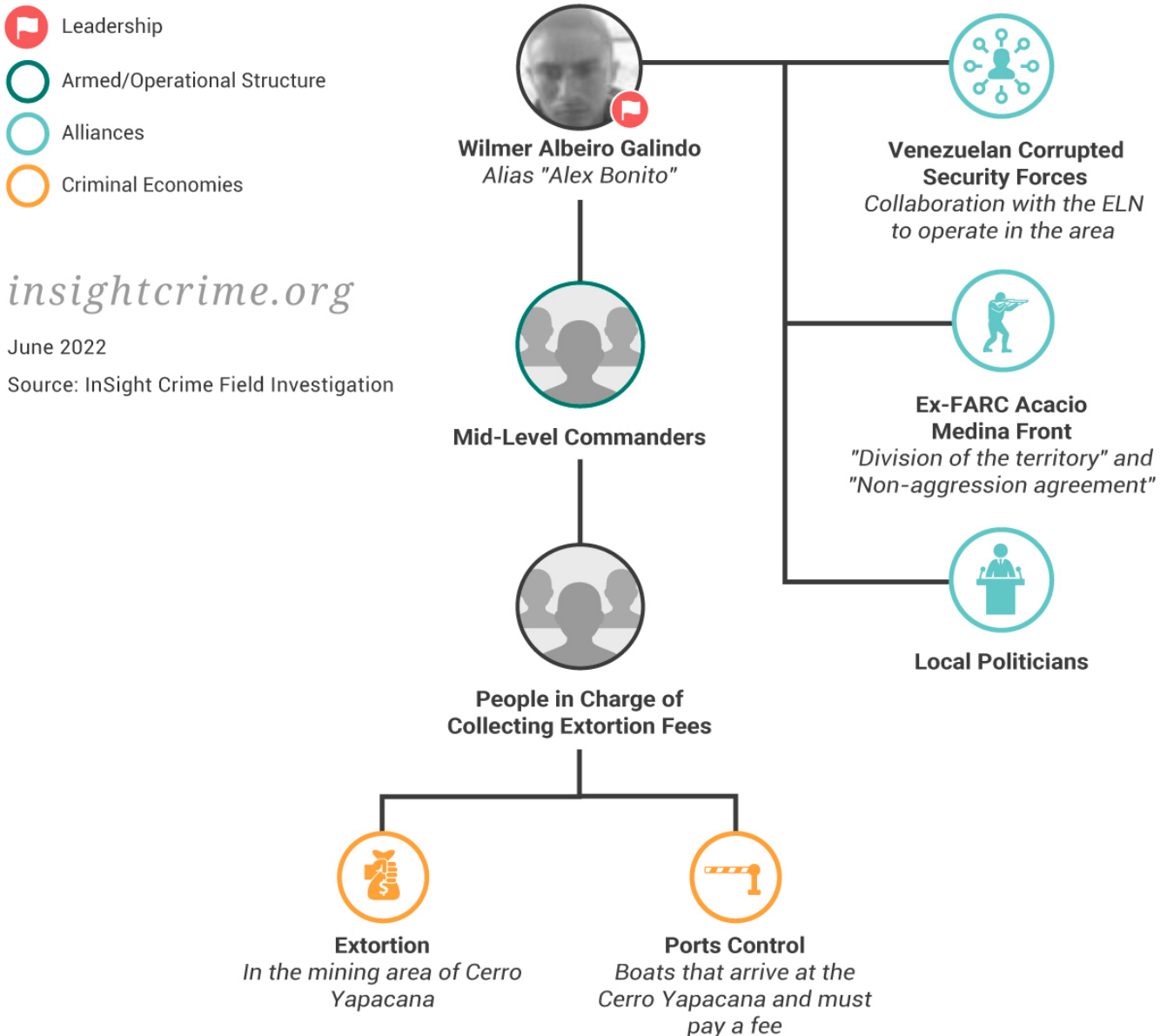
Pushing south from the Venezuelan state of Apure into Amazonas, ELN fighters have waged a campaign along the Orinoco River. The 2017 demobilization of the FARC, through a historic agreement with Colombia’s government the year before, cleared the way for the ELN’s Daniel Pérez Front to move into the region.⁸⁷

Wilmer Albeiro Galindo, alias “Alex Bonito,” heads the guerilla unit, which carried out a wave of killings when it arrived in 2020. Members of the ELN and ex-FARC initially

clashed. But the two groups have managed to delineate space and share an uneasy alliance.⁸⁸

“They coexist, share, coordinate. I don’t know how,” said an official for an Indigenous community organization who asked to speak anonymously for security reasons.⁸⁹ “Along the border, the ELN is more visible. They are along the Inírida River, where they extort and conduct illegal mining. Meanwhile the FARC does the same, but in Cerro Yapacana.”

ELN Daniel Pérez Carrero Front Network



ILLEGAL GOLD RUSH DRWS CRIMINAL GROUPS TO BRAZIL'S YANOMAMI RESERVE

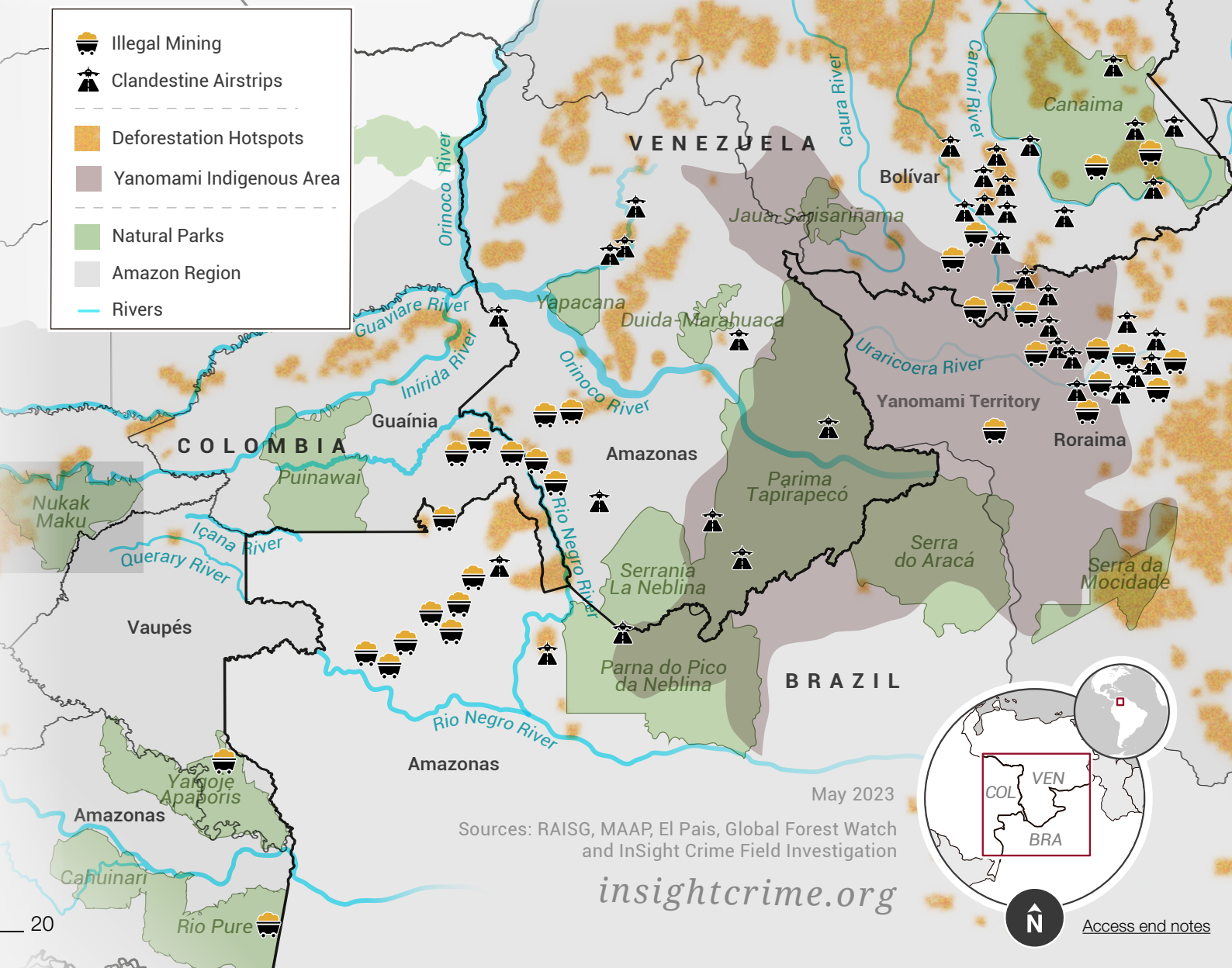
On October 2, 2022, the owner of a trade tent on Brazil's Uraricoera River received a WhatsApp message from the "wolves," an armed gang of illegal prospectors.⁹⁰ An attack was coming, he urgently warned a group of Yanomami Indigenous gathered there.⁹¹

Before the Yanomami could flee, gunmen arrived in two boats and opened fire. A 15-year-old Yanomami boy was shot in the face.⁹² A bullet, photos show, hit him in the left

cheek and then exited the back of his neck.⁹³ Miraculously, the boy survived.

A 46-year-old Yanomami man named Cleomar was not so lucky. He was killed when shots struck him in the forehead and chest as he flung himself into the river attempting to escape, according to a letter sent to Brazilian authorities by the Hutukara Yanomami Association (Hutukara Associação Yanomami), which represents the Yanomami people in Brazil.⁹⁴

Illegal Mining and Deforestation Across the Tri-Border of Brazil, Venezuela, and Colombia



“What happened demonstrates that the situation of insecurity on the Uraricoera River, due to the unimpeded circulation of illegal miners, has not ceased and deserves urgent intervention,” Yanomami leader Dário Kopenawa wrote in a letter signed October 4, 2022.⁹⁵

Some 20,000 illegal prospectors have pushed into the Yanomami reserve, felling trees and ripping up riverbeds.⁹⁶ Greater in size than Portugal, the reserve stretches across over 105,000 square kilometers on the Brazil-Venezuela border, making it the world’s largest Indigenous territory.⁹⁷

The Uraricoera River, which cuts across the northern section of the reserve, acts as highway for the advance of criminal mining operations there. Vessels ranging from long wooden boats to massive dredges motor along the waterway, carrying a constant influx of miners, supplies, equipment, food, alcohol, and fuel.⁹⁸

Armed men who patrol the Uraricoera in speedboats offer some of the most visible proof of organized crime’s spread into illegal gold mining.⁹⁹ The gangs tax miners and others along the river, including boatmen and shopkeepers. Drug trafficking and brothels bring the gangs further earnings.¹⁰⁰

Some of the gunmen are themselves part of mining operations. Others are alleged to be part of Brazil’s largest and most powerful criminal gang, the First Capital Command (Primeiro Comando da Capital – PCC), which appears to be taking on a greater role in illegal mining in the Yanomami reserve.¹⁰¹

Corrupt authorities are also involved. Members of an elite regional intelligence unit have been implicated in providing weapons and having links to a man nicknamed “Soldado,” who is described in a police investigation as a head of “mining security” on the Uraricoera.¹⁰²

Members of the army operating in Roraima, one of the states that the Yanomami reserve crosses, have been accused of leaking information on operations against illegal mining

and receiving bribes in exchange for turning a blind eye to the movement of drugs and gold, according to Brazilian media coverage of intelligence reports from the government’s Indigenous affairs agency (Fundação Nacional dos Povos Indígenas - Funai).¹⁰³

Kopenawa, the Yanomami leader, wrote in his letter that “there are constant fears about the amount of heavily armed prospectors coming up and down” the river.¹⁰⁴

Wildcat Miners Lay Waste to the Forest

Intrusions by illegal miners, known in Brazil as garimpeiros, began in the 1980s. A decade later, amid international pressure, the Brazilian government suffocated most illegal mining in the region.¹⁰⁵ History repeated itself and illegal mining rekindled in the Yanomami reserve during the tenure of former President Jair Bolsonaro, who vowed to develop the Amazon economically and tap its mineral riches.¹⁰⁶

According to a report by the Hutukara Yanomami Association and the Social-Environmental Institute (Instituto Socioambiental – ISA), an environmental and Indigenous rights advocacy group, deforestation in the reserve more than doubled from some 1,200 hectares in 2018 to 3,300 (equal to about 2,400 soccer fields), by the end of 2021. All of it related to mining.¹⁰⁷ More than half of the gold mining on the reserve takes place around the Uraricoera River.

The zone within the reserve that has seen the worst deforestation during the past two years is Waikás, located on the Uraricoera in the northern part of Roraima. In 2020 and 2021, nearly 2,600 hectares of forest were destroyed there by miners who travel the river unchallenged.¹⁰⁸

Mining operations have also begun in the Auaris region, in the northwest corner of the reserve, which borders Venezuela. Two mining sites have been observed there using satellite imagery, according to the report by the Hutukara Yanomami Association and the ISA.

One sits on the Brazilian side of the border, and the other on the Venezuelan side. Both sites are small but appear to be growing.¹⁰⁹

Illegal prospectors looking for gold have overrun other rivers as well. Mining near the Parima River intensified during the height of the COVID-19 pandemic, stripping more than 100 hectares of forest. Deforested land around Xitei, at the headwaters of the Parima, jumped from 11 hectares in 2020 to 136 in 2021, the largest increase of any region tracked by the report.¹¹⁰

The Mucujái River, which runs east across the reserve to the Mucujái municipality in Roraima, and its surrounding forests have been devastated by illegal mining operations. In Homoxi, a region at the headwaters of the Mucujái, a chain of massive mining pits appears like a small town carved into the greenery, an aerial photo shows.¹¹¹ In March 2022, one pit swallowed a medical post serving the Yanomami community.¹¹²

A video taken by miners, circulated by local news media in April 2021, shows them bragging about having altered the course of the Mucujái.¹¹³ A miner films the silt-choked river, saying, “look at how we left it.” He then pans over to show a pump and large hoses. “We now are working on the riverbed,” he says.¹¹⁴

This type of wildcat mining lays waste to the rainforest. Trees are razed to dig pits. Powerful streams of water are shot into them to loosen the earth. Gas-powered pumps suck up the mud, which is then washed over a long sluice. The extracted sediment is mixed with liquid mercury, which clings to the gold. Using shallow pans, the miners then heat the resulting amalgam to form nuggets.¹¹⁵

The process poisons the forest. Trees absorb mercury vapor,¹¹⁶ while milky, mercury-contaminated toxic pools are left behind to leach into groundwater and rivers.¹¹⁷

The widespread use of mercury threatens the Yanomami, who live in large, circular communal dwellings that house as many as 400 people.¹¹⁸ As with the exposed Indigenous communities in Colombia, high concentrations of mercury were found in hair samples from Yanomami communities near mining sites.¹¹⁹ An analysis of water at the confluence of the Orinoco and Ventuari rivers, at the western edge of Yapacana national park, found high levels of mercury as well.¹²⁰

Fish, a major part of the diet of the Yanomami, are contaminated. According to a 2022 study, more than half the fish collected from the Mucujái and Uraricoera rivers have mercury levels considered unsafe for consumption.¹²¹ Prolonged exposure to mercury causes fatigue, and damage to the immune system and vital organs.¹²²

Júnior Kekurari, a Yanomami leader who heads the local Indigenous health council, has described miners working within 50 to 200 meters from Yanomami communities.¹²³

“The Yanomami land, since 2018, has suffered a lot ... Rivers are destroyed, there is only mud, contaminated with mercury, the smell of gasoline ... Children play in the river, drink. The community consumes water that is dirty,” Kekurari explained in an interview with the podcast *Ao Ponto*, from the newspaper *O Globo*.¹²⁴

Garimpeiros and Gunmen Find Golden Opportunity

Strictly speaking, *garimpeiro* refers to small-scale artisanal miners, though the term is outdated. Most *garimpo* operations are no longer artisanal, since they use heavy machinery, including rafts, dredges, tractors, and bulldozers. And the term today is more commonly used to refer to illegal miners in the Amazon.¹²⁵

Of 174 tons of gold traded between 2019 and 2020, garimpeiros are estimated to be responsible for 49 tons, equivalent to 28% of Brazil’s gold production.¹²⁶

Brazilian law allows them to operate legally, including in parts of the Amazon. Under ordinance DNPM 155, enacted in 2016, each *garimpeiro* is allowed to mine in up to 50 hectares in designated areas, while mining cooperatives may be granted up to 10,000 hectares.¹²⁷ Brazilian law restricts *garimpo* in Indigenous Lands and environmental protected areas.¹²⁸

The law, however, puts no restrictions on techniques or equipment, unlike neighbors Colombia and Peru.¹²⁹ Colombian law requires strict registration of machinery through the Ministry of Transportation, while Peru has banned the use of heavy machinery in small-scale mining, among other measures.¹³⁰

Miners have rapidly expanded outside of permitted areas and invaded protected regions, clambering to get at gold using everything from pickaxes and chainsaws to heavy machinery that includes backhoes. Illegal mining operations on Indigenous lands jumped nearly 500% from 2010 to 2020, according to a study by MapBiomas, which tracks land transformation in Brazil.¹³¹ In conservation areas, the increase was just over 300%.

Most miners come from rural communities with poor educational systems and limited opportunities for well-paid work.¹³² Individual miners are often co-opted by criminal entities that supply them machinery in exchange for most of their returns.

The miners move fluidly among the three countries of this border region. For example, Brazilian *garimpeiros* have ventured into the portion of the Yanomami located in the Venezuelan side to set up mines.¹³³ According to an investigation by news outlet UOL that used video, photos, documents, and interviews with Indigenous leaders, the number of miners crossing the border number anywhere between 500 and 5,000.¹³⁴

Garimpeiros and other types of laborers, hailing from other regions of Brazil, are drawn to Yanomami territory by ads on social media offering a range of jobs, including as machine operators, drivers, pilots, and cooks.¹³⁵

As in Venezuela's Yapacana, the currency in the Yanomami reserve is gold. Boatmen who shuttle miners on long, difficult-to-navigate stretches of the Uraricoera earn 10 grams per passenger.¹³⁶ Bars, brothels, and canteens have sprung up along the river and around mining sites.

In Brazil, mine "owners" control all commercial, logistical, and camping structures on the Uraricoera River.¹³⁷ One example of a so-called mine owner is Dona Iris, who was arrested in June 2022 on illegal weapons charges. An arrest affidavit reported by O Globo alleges that the 55-year-old woman used properties in Alto Alegre, a municipality in northeastern Roraima, to shuttle supplies and people to illegal mining sites, where she employed an armed escort.¹³⁸ According to the report by Hutukara Yanomami Association and the ISA, Dona Iris ordered attacks on riverside Yanomami villages in retaliation for blocking mining operations.¹³⁹

Mine owners charge fees for access to makeshift ports. They extort miners and tax the sale of alcohol and other products. Prostitution and drug sales are also under their control.¹⁴⁰ Venezuelan women traveling across the border have been lured to mining sites and sexually exploited.¹⁴¹ One woman who spoke with Brazil news outlet Folha de S. Paulo said she was trafficked by a madame who convinced her to go to a mining site, where she was raped.¹⁴²

Booming illegal commerce has drawn more dangerous criminal actors to the region and opened a path for them to enter the illicit gold trade. A video recorded in 2021 showed an armed gang on an aluminum motorboat speeding along the Uraricoera River.¹⁴³ In this video, the men, some of them hooded, brandish pistols and shotguns. The camera then turns to a man in a red T-shirt and baseball cap, with a thick gold chain hanging from his neck that ends in a crown pendant.

“Look at us, look at us, look at us. These damn Indians think they are in charge. We are in charge. We’re the fucking boss. Today we are going to see how this shit works. Look. Look. Look. We are the war.”¹⁴⁴

One of the men in the boat later arrested was found to be a fugitive linked to the PCC gang.¹⁴⁵ Charged with drug trafficking in 2013, Janderson Edmilson Cavalcante Alves had escaped from a Roraima prison and fled to Venezuela, where he was later linked to a 2019 robbery of 100 rifles at an army barracks.¹⁴⁶

To escape authorities in Venezuela, the 30-year-old holed up in the Brazil border region, where he trafficked drugs and served as a hired gun for mining operations. The arrest of Cavalcante Alves, who told authorities he was an associate of the PCC,¹⁴⁷ provides a glimpse of the criminal gang’s presence in illegal mining on Yanomami territory.¹⁴⁸

Roney Cruz, head of an intelligence division of Roraima’s prison system (Divisão de Inteligência e Captura do Sistema Prisional de Roraima), has told local news outlets that PCC gang members are active in the mines. In an investigation by Brazilian news outlet UOL, Cruz said the gang even had a boat moored in the Uraricoera that they called the funerária, or funeral home, for its use in death missions.¹⁴⁹

It makes sense that the PCC would have a toehold in the mines in some way, given the sheer amount of criminal activity occurring there and the group’s growing strength in Roraima and the rest of Brazil’s Amazon region.

The UOL investigation goes further, claiming that gang leader Endson da Silva Oliveira, alias “Bebezão,” and his brother, Emerson, structured PCC activities along the Uraricoera. Killed in separate shootings, the brothers had an accomplice who was found with mining equipment in his home.¹⁵⁰

It’s unclear, though, whether the PCC merely has a few members who have found opportunity acting as enforcers in the lawless mines, or if gang members have infiltrated the higher ranks of mining operations as well.

What is clear is that criminals have acted with impunity in Yanomami territory for years in the absence of authorities. Despite being the Indigenous territory with the largest number of federal police operations, these have been largely ineffective.¹⁵¹ The police assure that many operations have not taken place due to a lack of logistical support from the army and other federal institutions.¹⁵² Another government security post, known as Ethno-Environmental Protection Bases (Base de Proteção Etnoambiental - Bape), that controlled access to the Uraricoera River has been inactive for several years.¹⁵³

Some Yanomami have sought to protect themselves from the encroachment of illegal miners.¹⁵⁴

In 2021, Yanomami in Palimiú put up a barricade in the Uraricoera and stopped a speedboat full of miners. Yanomami youth carried away some 1,000 liters of fuel before turning the boat around. Their actions were in retaliation for the drowning of a child knocked over by a mining boat’s wake, according to the report by Hutukara Yanomami Association and the ISA.¹⁵⁵

For several months afterward, gunmen in motorboats drove past Palimú’s riverside villages, firing shots from automatic weapons. The threat of violence against them continues.¹⁵⁶

In his October 2022 letter to authorities, Yanomami leader Kopenawa said that a miner known as “Brabo” had recently warned the community in Palimiú to “not oppose illegal mining installed in the region -- if they did not want a repeat of the episodes of attacks in 2021.”¹⁵⁷

Brazil Targets Illegal Gold Mining in Yanomami Lands

The impunity that illegal miners and criminal networks have enjoyed in Yanomami territory could be faltering. Brazil's new president, Luiz Inácio Lula da Silva, came to power with ambitions to reverse the destructive approach to the environment of his predecessor, Jair Bolsonaro.

During his first month in office, Lula visited Roraima state and the Yanomami territory.

"More than a humanitarian crisis, what I saw in Roraima was a genocide. A premeditated crime against the Yanomami, committed by a government impervious to the suffering of the Brazilian people," Lula tweeted.¹⁵⁸

In January 2023, Lula's justice minister, Flávio Dino, announced his intention to open an investigation with the federal police into the crimes that the Yanomami have suffered, including genocide.¹⁵⁹

At the same time, Lula deployed a crippling blow to illegal mining on Yanomami land.¹⁶⁰ In February 2023, armed agents of the government's environmental protection agency (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais - Ibama), and the government's Indigenous affairs agency (Fundação Nacional dos Povos Indígenas - Funai), launched an enforcement operation in the Yanomami reserve to expel thousands of wildcat gold miners.¹⁶¹ Helicopters, illegal airstrips, heavy machinery, fuel, and weapons have been destroyed.¹⁶²

The air force will control the airspace that until recently was unpatrolled.¹⁶³ A mobile radar system will allow intercepting flights in the area, while the navy will patrol the rivers.¹⁶⁴

To avoid security operations, *garimpeiros* are crossing the borders into Venezuela and Guyana.¹⁶⁵ And while this is a small victory for the defense of the Yanomami territory, it is also creating a balloon effect by displacing wildcat miners to other mining regions in the Amazon Basin.

Small Aircraft and Clandestine Airstrips Feed Illegal Mining in Brazil's Amazon

It's easy to detect the small planes and helicopters used in illegal mining operations. All seats but the pilot's are stripped from the aircraft, replaced by metal and plywood shelving to hold gas containers.¹⁶⁶ This fuel is flown to open pits to power motors, chainsaws, and digging machinery.

The fleets land on an expanding patchwork of airstrips near mining sites across the Brazilian Amazon.¹⁶⁷ Most are little more than a path etched into the jungle. A few are pre-existing dirt runways, originally built to bring medicine and healthcare workers to Indigenous communities.¹⁶⁸

A New York Times investigation that examined thousands of satellite images dating back to 2016 found 1,269 unregistered airstrips in the Brazilian Amazon. Sixty-one of them occurred on Yanomami land.¹⁶⁹

These airstrips have been another gateway to the Yanomami reserve.¹⁷⁰ Most flights take off from Boa Vista, Roraima's capital, further east of the border between Brazil and Venezuela.¹⁷¹

The Business of Illegal Gold in Brazil's Boa Vista

Near Boa Vista, is the Barra do Vento airport, a primary transport hub for flights entering and exiting the Yanomami reserve.¹⁷²

Pilots arrive there in search of risky work that can bring big paydays in gold, according to the investigative news outlet Repórter Brasil.¹⁷³ They fly small, old propeller planes low over the jungle canopy, navigating the maze of dirt landing strips. Some have crash-landed in the forest, never to be seen again.¹⁷⁴

Owners of air transport companies are among the major players alleged to be involved in illegal mining and laundering gold.

Two figures stand out as examples of this illicit nexus. Valdir José do Nascimento, known as Japão, is alleged to own a fleet of aircraft used to ferry food, fuel, and instruments to mining sites, and to shuttle gold out of them, according to Brazil's Federal Public Prosecutor's Office (Ministério Público Federal - MPF).¹⁷⁵ In a single week, some 20 flights were carried out to mines by planes owned by Do Nascimento, Repórter Brasil reported. Each flight cost on average 10 to 12 grams of gold, prosecutors claimed. In just one week, the "criminal organization made a profit of around 200,000 reais (about \$37,500)," prosecutors said.¹⁷⁶

Do Nascimento is the registered owner of seven 1970s-era single-engine Cessnas, as well as a twin-engine nine-seat plane. Prosecutors called him the "biggest promoter of illicit mining activity in the Yanomami Indigenous land," according to Repórter Brasil.¹⁷⁷

Pilot and aviation businessman Rodrigo Martins de Mello has also come under investigation for his involvement in illegal mining.¹⁷⁸ He was charged in December 2022 with extraction of minerals without authorization and formation of a criminal organization, as well as other crimes, according to a complaint filed in federal court.¹⁷⁹

Martins de Mello, who ran for congress under Bolsonaro's Liberal Party (PL) in the 2022 election and is an outspoken supporter of mining interests, had helicopters seized during a 2021 raid of his air taxi company and drilling firm based near Boa Vista.¹⁸⁰ Both businesses are the subject of a police probe into a larger illegal mining network that moved more than 200 million reais (about \$37.5 million) over two years, according to prosecutors.¹⁸¹

Martins de Mello has denied allegations of involvement in illegal mining, saying that "there is a lot of fanciful information."¹⁸²

Despite wrapping himself in the flag at campaign rallies, Martins de Mello, who is also known locally as Rodrigo Cataratas, lost his bid for congress. Even after his defeat, which came as a relief to Indigenous rights activists who feared his election would grant him immunity from prosecution, Martins de Mello continued to rally for gold mining interests.¹⁸³

In an interview with Folha de S. Paulo, Martins de Mello promised to "carry the message of the need to resolve this conflict between gold miners and federal agencies," and characterized the miners as "victims of abuse of authority by federal agencies."¹⁸⁴

About a month after the October election, a federal court ordered the arrest of Martins de Mello's son, Celso Rodrigo de Mello. The warrant alleged Celso Rodrigo's involvement in suspicious transactions and a helicopter crash that killed two people.¹⁸⁵

The Links in Gold-Laundering Networks

Downtown Boa Vista is home to the “Rua do Ouro,” or “Street of Gold,” where dozens of small jewelry shops and distributors of securities, or DTVMs (Distribuidoras de Títulos e Valores Mobiliários), openly purchase illegal gold extracted in Yanomami lands and other parts of the Amazon.¹⁸⁶ Doors are tinted. Men guard entrances. Most stores lack display windows. According to Amazonia Real reporters who visited Rua do Ouro and spoke to a goldsmith there, gold is sold as sediment or nuggets to be further refined.¹⁸⁷

Prospectors, drivers, cooks, and anyone else with gold to sell make use of the shops. Pilots deliver them large quantities of gold on behalf of illegal mine operators.¹⁸⁸

The shops serve as the first link in the gold laundering chain. The gold, though, must be moved elsewhere in the country for trade and even export. According to Brazil’s National Mining Agency (Agência Nacional de Mineração - ANM), the body responsible for granting and monitoring licenses for miners, there are no legal mining operations whatsoever in Roraima.¹⁸⁹

The mixing of illegal and legal gold for export is often done by networks affiliated with designated brokers and DTVMs, which are the entities authorized by the Central Bank to buy and sell gold in Brazil.¹⁹⁰

According to an Escolhas Institute study, which has investigated the companies involved in the laundering of illegal gold in Brazil, Brazil’s four largest DTVMs traded some 90 tons of gold, about a fifth of the country’s production, from 2015 to 2020. The vast majority of this -- some 79 tons (worth about \$3.8 billion at that time) -- were of suspect origin.¹⁹¹

Some of the largest DTVMs often control the entire gold chain, starting with mining titles and permits. DTVM associate companies include those involved in geological surveys, extraction, gold buyers in various states, and refining.¹⁹²

So far, the DTVMs can easily avoid accountability when purchasing gold. Enacted in 2013, Law No. 12,844 -- which regulates the purchase, sale, and transport of gold -- requires sellers, not buyers, to prove the gold is of legal origin.¹⁹³ Sellers self-declare sources of their gold, providing copies of mining permit numbers, Rodrigues said.

The reality is that anyone can say “gold came from this area, with mining permit X, and no one will check,” Rodrigues said. “The DTVMs or the shops will keep these forms, and it’s all considered to be done in good faith.”

In April 2023, however, the Brazilian Supreme Court challenged the “good faith principle” approach, granting an injunction to suspend the practice and mandating the establishment of a new regulatory policy. The decision reinforces the current government’s efforts to crack down on illegal gold mining in Indigenous lands and other environmentally protected areas.

Heads of DTVMs, their family members, and associates have been alleged to be involved in illegal mining.

Brazil’s Federal Prosecutor’s Office has attempted to go after the DTVMs. In August 2021, prosecutors filed a civil suit against FD’Gold, Carol DTVM, and OM DTVM, three of the largest such firms, accusing them of pouring 4.3 tons of illegal gold into national and international markets over two years.¹⁹⁴ The lawsuit calls for their operations to be suspended and the firms fined \$10.6 billion reais (about \$2 billion) for social and environmental damages.

One DTVM has been accused of orchestrating a vast network that laundered gold from Yanomami territory.¹⁹⁵ The network came to light after a 2015 police raid that dismantled a mine of some 600 prospectors operating on the northern edge of the reserve.¹⁹⁶ According to police and prosecutors, more than two dozen gold-buying storefronts in Boa Vista received the illegally produced ore, which was then refined and sent to 30 legitimate mining firms owned by the DTVM in the Amazonian

cities of Manaus, in Amazonas; Itaituba and Santarém, in Pará; and Porto Velho, in Rondônia.¹⁹⁷ Documents were forged to indicate that the gold came from legal mines in three states. The mining companies also further smelted the gold into 250-gram bars that were then sent to the DTVM.¹⁹⁸

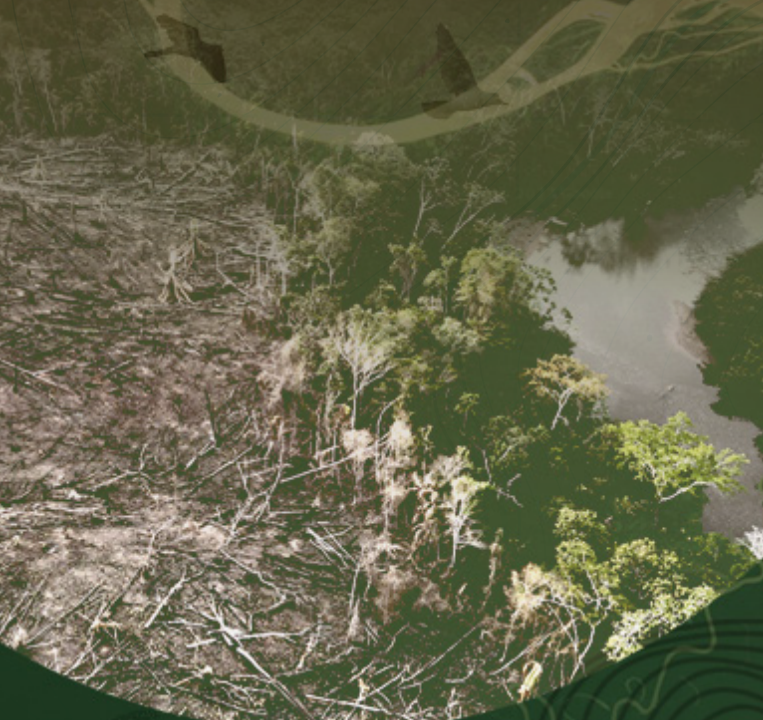
Through the network, the DTVM received about two tons of gold per year, according to the head of a regional anti-organized crime unit who spoke to Amazonia Real. The accused DTVM, however, was never identified publicly.¹⁹⁹

Since Lula took office, he has launched a crusade to strengthen lax legislation that has facilitated gold laundering in Brazil. One of the first steps is the introduction of Resolution No. 129 of Brazil's National Mining Agency (Agência Nacional de Mineração - ANM), the agency responsible for inspecting mining sites.²⁰⁰ With the implementation of this resolution, gold buyers must now have systems in place to prove that the gold they buy has not been illegally sourced.²⁰¹

TIMBER TRAFICKING

COLOMBIA

PERU



TIMBER TRAFFICKING

Once untouched forest is now feeling the predatory hands of timber traffickers in the Amazon's two tri-border regions.

Illegal loggers have begun to migrate to Brazil's northern Amazon. According to a 2019 study that looked at illegal logging in the Anauá National Forest, loggers and sawmills are relocating from the Brazilian states of Mato Grosso, Pará, and Rondônia to Roraima, on the border with Venezuela and Guyana. The region has come to be seen as a "new gold woodland," thanks to the large swaths of forest, low cost of land, and few controls on deforestation and logging, the study authors wrote.²⁰²

Illegal timber harvesting in the tri-border regions is most prevalent in the Amazon forests of Peru, where a multinational operation with many tentacles targets high-value hardwood species, such as spruce (*Virola calophylla*), tornillo (*Cedrelinga catenaeformis*), and cedar (*Cedrela odorata*). Trees are felled, transformed into planks, and eventually exported. The process includes legitimizing the timber through logging and transport permits, sawmills, and brokers before shipping it to regional capitals like Bogotá and Lima, or to international markets such as China.²⁰³

A Tri-Border Town Built on Timber

Nestled on a bend of the Yavarí River near the Colombia and Brazil borders, Peru's Islandia sits on an ideal corner for receiving boatloads of wood.

"In Islandia there are giant sawmills," said a member of the Indigenous Fray Pedro community in Peru. "The loggers in the area take a lot of wood to Islandia to process it there."²⁰⁴

Determining the origin of this freshly processed timber is difficult.²⁰⁵ The sawmills use multiple means to camouflage their illegal activities, including falsifying the registries of wood entering and leaving their facilities.²⁰⁶

Some of the timber processed in Islandia is brought to Colombia's Leticia, just 45 minutes upriver by boat. The shipments are small -- valued at less than \$1,000 apiece -- to avoid incurring import duties. According to a 2019 report by the UK-based Environmental Investigation Agency (EIA), an organization dedicated to the study of environmental crime, some 250 families in the nearby Colombian town of Puerto Nariño are buying wood from Islandia sawmills.²⁰⁷

The Timber Extraction Chain Across the Tri-Border of Peru, Colombia, and Brazil



1. Valuable species of wood are razed.



2. The wood is transported via river – using transport permits – to sawmills in the area, most of them located in the Peru border town of Islandia.



3. The sawmills cut the timber into boards, beams, and planks – a process known as primary transformation. A secondary processing can also take place, where its constructed into doors, tables, and flooring.



4. The processed wood winds up in cities like Bogota, Colombia, or Lima, Peru. It is also sold on international markets in the United States and China.



insightcrime.org

November 2022

Sources: InSight Crime field work and Environmental Investigation Agency (EIA)

Wood imports must be authorized by Colombia's National Authority of Environmental Licenses (Autoridad Nacional de Licencias Ambientales - ANLA) to ensure the wood is of legal provenance. The EIA investigation, however, found that ANLA had not authorized any wood imports to Leticia between 2015 and 2019, despite nearly 10,000 cubic meters of wood planks arriving there during that period. The small timber shipments may not just be to avoid taxes but also ANLA controls. Much of the wood imported to Colombia is not declared at all, according to the EIA report.²⁰⁸

A 2012 World Bank report found that about 80% of Peru's timber was illegally extracted.²⁰⁹ Rolando Navarro, the former director of Peru's Supervisory Agency for Forest Resources and Wildlife (Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre - Osinfor), the entity that oversees and controls forestry and wildlife use, confirmed that this is still the case.

Timber 'Patrones' Exploit Indigenous Communities

Timber *patrones*, or bosses, have targeted Indigenous communities in Peru for their ability to seek permits and concessions to extract timber on their lands.²¹⁰ The *patrones* promise jobs and earnings for the communities but often deliver only exploitation.

In Peru, timber is harvested under the protection of environmental authorities through forestry concessions and logging permits.²¹¹ Annual Operating Plans (Planes Operativos Anuales - POAs) are supposed to serve as controls, but end up providing cover for illegally logged timber, as information in these plans can be falsified and often goes unverified.²¹²

A Peruvian forestry expert, who spoke anonymously for security reasons, said that Matsés Indigenous communities in Loreto ended up regretting agreements to do business with an alleged timber *patron*, Teodulfo Palomino Ludeña.

In 2013, Palomino approached the Matsés Indigenous community of Fray Pedro, which sits near the border of Brazil, representing himself as someone in the timber trade and offering work and economic support, including helping youth gain access to higher education, said a Fray Pedro community member, who spoke on condition of anonymity out of fear of reprisals.²¹³

The Fray Pedro community agreed to negotiate with Palomino.²¹⁴ In November 2013, the community signed an "exclusive supply and commercialization contract" with him and his company Lanc Forest SAC, which allowed it to actively log in the community's territory, according to documents from the Loreto prosecutor's office.²¹⁵

In 2019, suspicions emerged about Palomino when Osinfor agents came to inspect management plans and Palomino became nervous. "We didn't understand why he was getting tense if he was supposed to be doing everything right," said the Fray Pedro community member. "And he asked us not to let Osinfor come in to inspect."²¹⁶

Palomino was concerned about standing trees that should have been cut down, said another Fray Pedro community member. The trees were recorded as extracted on the forestry management plan, which meant the trees that were harvested must have come from somewhere else, the community member said. Seeing the trees still standing, Osinfor inspectors would suspect inconsistencies in the information being provided on the forestry management plan.

Soon afterward, community leaders became aware of a long list of irregularities, including alleged harvesting of excess volumes of timber, and using the community's management plan to launder timber that had been extracted illegally.²¹⁷

Palomino also allegedly doctored the community's ledgers, forging the signatures of its leaders on deeds.

“Palomino wanted to take more than 80,000 hectares of land from us and said that we were supposedly donating the territory to him,” added the community member.

The community reported that the deed book had gone missing.

Palomino, who could not be reached for comment, no longer extracts timber in Fray Pedro territory, but the community continues to suffer the consequences of his actions. Forestry authorities fined them almost 200,000 soles (about \$50,000) for violations. The community’s logging permit and the approval of other management plans in the territory were suspended.²¹⁸

Illegal Wood Laundered in Peru’s Amazon Capital

The main clients of Islandia’s sawmills are in Peru’s Iquitos, the capital of the massive Amazon department of Loreto. Iquitos is a major transit and processing hub for wood, and timber brokers there are notorious for laundering illegal wood.²¹⁹

For example, Peru prosecutors have accused Elizabeth Lazares de La Cruz, the head of an Iquitos-based timber company, of being involved in a massive trafficking network known as “Los Duros del Amazonas,” or the “Toughs of the Amazon.”²²⁰

According to court files reviewed by Ojo Público, Lazares de La Cruz is alleged to have used the company to launder illegally sourced timber from the Peruvian Amazon, including from the border department of Loreto.²²¹

Navarro, the former Osinfor director, called Lazares a broker and said she had contacts in the regional government of Loreto and local sawmills. Lazares also had the documents needed to make illegal timber appear legal, and then sell the laundered timber on to connections in Lima and abroad.²²²

“She checks the product in the field and makes sure to fulfill the requests of companies,” said Navarro. “She is doing the grunt work and she is the person who is getting her shoes dirty.”²²³

COCA AND DRUG TRAFFICKING



COCA AND DRUG TRAFFICKING

The Amazon forest and watershed shared by Peru, Colombia, and Brazil provide ideal cover for coca cultivation and processing. As a result, a cocaine trafficking chain has emerged there -- one that begins with coca grown in Peru. The criminal infrastructure created to feed this trade also protects and promotes environmental crimes, such as illegal deforestation, timber trafficking, and illegal gold mining. The remote areas have little state presence, and the dense forest canopy makes illicit activities and armed groups largely invisible.

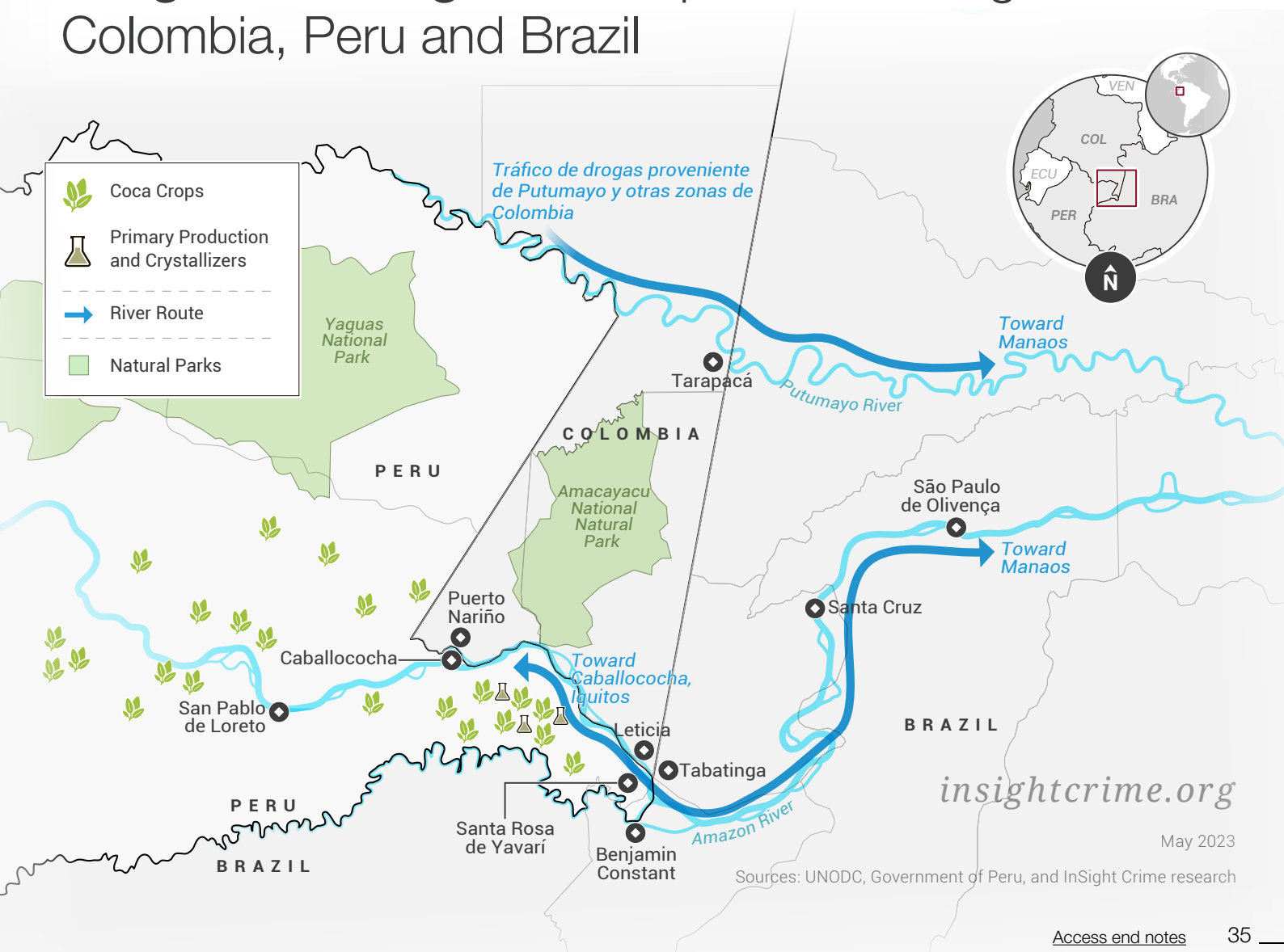
The tri-border where Colombia, Brazil, and Venezuela meet has continued to maintain

its longstanding role as a transit corridor for cocaine.²²⁴ Though it's not known as a drug production hub, the Venezuelan side may be seeing new coca cultivation.

A pilot in Puerto Ayacucho, a city in Venezuela's Amazonas state, said he had observed coca cultivation in the northwestern municipalities of Autana and Maroa.²²⁵

While the pilot could not provide more specifics about coca growing in that region, coca has been cropping up more and more along Venezuela's border with Colombia, a 2022 InSight Crime investigation found.²²⁶

Drug Trafficking in The Triple Border Region of Colombia, Peru and Brazil



Sources: UNODC, Government of Peru, and InSight Crime research

A Burst of Coca Crops in Peru's Amazon

Until just a few years ago, Peru's tri-border region had been relatively free of coca. But now, criminals are clearing rich, verdant rainforest along the Amazon River to make way for the illicit crop.

Coca growing in Peru's Amazon first took hold further south of the tri-border, in the Upper Huallaga Valley, which extends for 322 kilometers along the Huallaga River in central Peru.²²⁷ In the early 2010s, mass cultivation for the cocaine trade shifted southward to the Valley of Apurímac, Ene, and Mantaro River Valley, a mountainous jungle region slightly larger than Puerto Rico that is known by its Spanish acronym, VRAEM.²²⁸

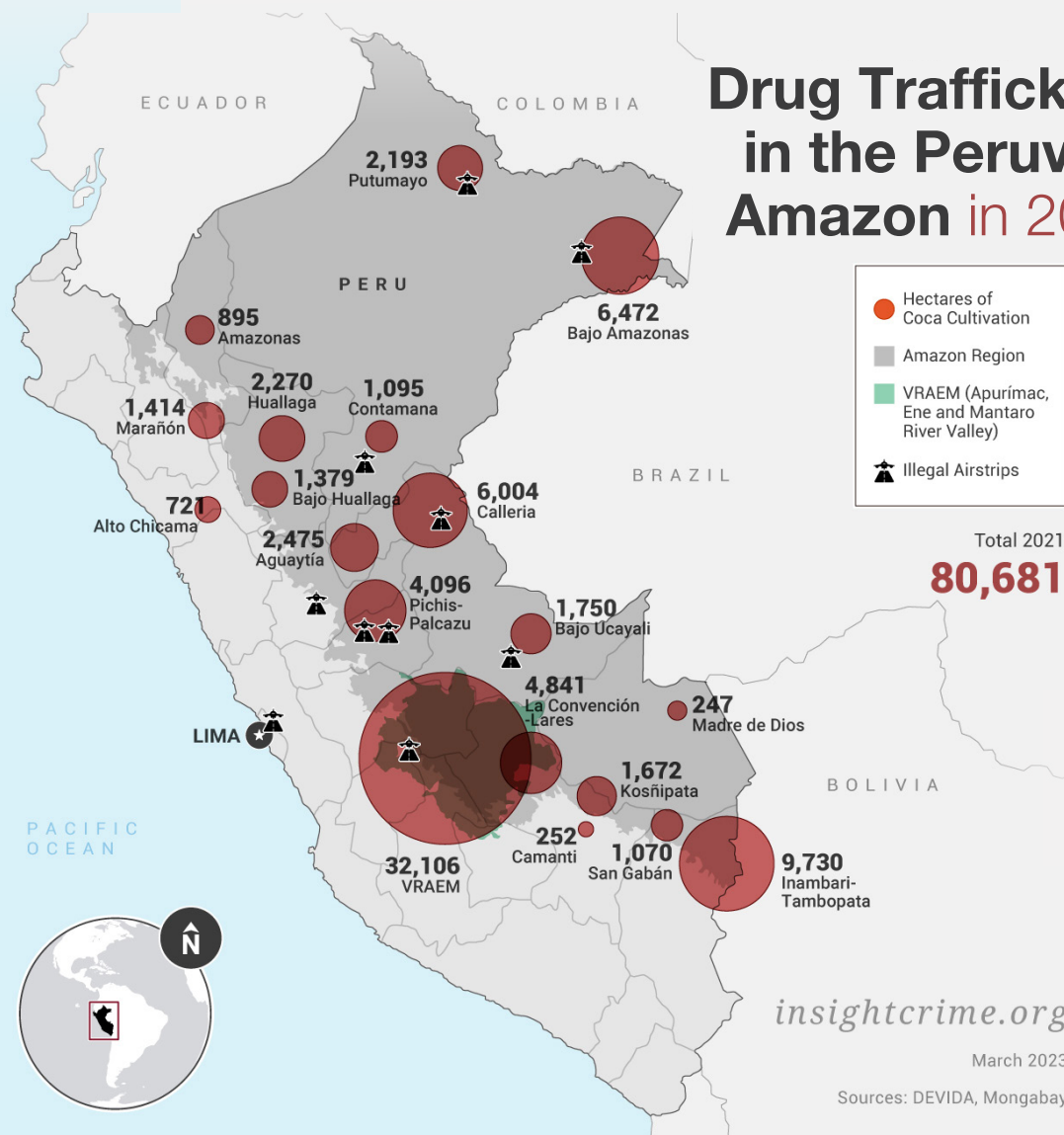
For a decade, a faction of the Shining Path (Sendero Luminoso) guerrilla force²²⁹ has holed up in the VRAEM, securing coca crops and moving cocaine on behalf of different clans.²³⁰ The government has, at times, tried to eradicate coca in the VRAEM with little success, yet the military presence appears to have pushed coca cultivation to other parts of the country -- most dramatically, the Amazon wilderness along Peru's tri-border with Colombia and Brazil. Previously, coca growing had been minimal there.

Loreto, the massive northeastern department that encompasses more than half of the country's Amazon, registered just 12% of the coca cultivated in Peru in 2004.²³¹ The department's Mariscal Ramón Castilla province, whose easternmost limits touch both Colombia and Brazil, registered only 440 hectares of coca in 2012.²³² By 2020, the area occupied by coca crops in Loreto's Bajo Amazonas region -- comprising Mariscal Ramón Castilla as well as neighboring Maynas and Requena provinces -- expanded to 4,247 hectares, according to a 2021 report by the Peruvian Drug Observatory.²³³ The number increased more than 50% to 6,472 hectares in 2021, according to the observatory's 2022 report.²³⁴

Security officials in both Colombia and Peru agreed that coca cultivation is increasing in Peru's border region.²³⁵ Juan Mojica and Santos Mojica, leaders of the Colombian Indigenous community of Nazareth, about an hour up the Amazon River from Leticia, said that crops being grown on the Peruvian side of the river have become a problem for their community.²³⁶

People, including school-aged adolescents, are crossing the river to work as *raspachines*, or day laborers hired to pick and process coca leaves, they said.²³⁷

Drug Trafficking in the Peruvian Amazon in 2021



insightcrime.org

March 2023

Sources: DEVIDA, Mongabay

Poor Indigenous and rural communities in Peru's Mariscal Ramón Castilla province are being paid to sow coca, according to an investigation by Peruvian newspaper La República.²³⁸

Traffickers also pay communities for sacks of coca leaves, known as arrobas.²³⁹ In some cases, they negotiate with community leaders to set up monthly payments for access to their territories.²⁴⁰ Ledgers kept by community assemblies even contain line items for land rents from traffickers and projects financed by them, according to the La República report.²⁴¹

Gunmen linked to traffickers have also invaded Indigenous communities' lands to install coca farms.²⁴²

An official from Mariscal Ramón Castilla's municipality mayor's office, who asked to remain anonymous for security reasons, said he feared that the Amazon province has become another

VRAEM for traffickers.²⁴³ Coca cultivation has doubled there over the past four years, and its 6,362 hectares of coca accounted for nearly all the illicit crops in Bajo Amazonas in 2021, according to the latest governmental drug report. Bajo Amazonas was the third-largest area for cultivation in the country.²⁴⁴

"We are in an area that for the state is not a priority," he said. "That is one of the reasons behind the increase in coca crops. We are on our own here."

For years Peruvian authorities have focused their counternarcotics efforts in the VRAEM. Meanwhile, authorities have ignored the tri-border while criminal networks have taken advantage of the area's natural infrastructure. Its numerous river arteries and thick jungle connect Colombia and Peru, the main drug-producing countries, with one of the major international cocaine exit points, Brazil.

Raids on primitive jungle laboratories in the Peruvian provinces of Putumayo and Mariscal Ramón Castilla reveal that coca is not only being grown but also processed there.

Authorities have announced seizures of gasoline drums, cement, and lime, all of which are used in the production of cocaine base.²⁴⁵

For example, a March 2020 raid ended in the destruction of two laboratories near the Orosa River, halfway up the Amazon River from Leticia.²⁴⁶ The camp held half a dozen 2,000-liter tanks, which are used to mix coca leaves with solvents.²⁴⁷ In February 2021, 600 kilograms of processed cocaine were discovered at a camp on the Atucari River, along the Colombia-Peru border.²⁴⁸

Drug and environmental crime also appear to be occurring in tandem. For example, a 2019 operation carried out in Mariscal Ramón Castillo led to the dismantling of wooden buildings for storing coca leaves, cocaine, and illegal timber.²⁴⁹

It is unclear who controls coca cultivation and processing labs in Peru's northeastern Amazon region.

Colombian law enforcement officials mentioned a group called Clan Chuquizuta. The Indigenous and rural communities in Mariscal Ramón Castilla described the traffickers who are paying them in general terms as “narco-benefactors.”

The most likely scenario is that the Peruvian traffickers in this region are freelancers who supply Brazilian and Colombian groups.

Santa Rosa is a small island on the Amazon belonging to Peru that sits adjacent Colombia's Leticia and the Brazil border city of Tabatinga. Long motorboats with plastic canopies carry locals to and from the island's port, which is nothing more than a wooden dock.



Along stretches of Peru's Amazon River, coca is being grown. Santa Rosa de Yavarí, Perú, August 2022. Photograph by: Seth Robbins

A soldier standing guard at the port said smugglers mostly avoid the island. Instead, they pass at night, using smaller waterways to evade controls, he said.²⁵⁰

Just north of the island on a wide stretch of river are the communities of Gamboa and Chinería. A senior Peru military official who asked for anonymity because he was not authorized to speak said he had heard of coca cultivation occurring there.²⁵¹

Armed Groups, Drug Routes, and Environmental Crime

The Amazon River and its vast network of tributaries and streams provide smuggling routes from Peru into Colombia and Brazil. The withdrawal of the FARC after 2016 ended the Colombian group's hegemony in the region, paving the way for an evolving mix of armed groups to compete for territory and nodes in the drug trafficking chain.

Groups' names change in this fluid criminal landscape. National and political allegiances are largely irrelevant. Alliances and enemies are made easily. Reaching deeper into this corner of the Amazon to control drug corridors, these armed groups have broadened into environmental crimes, particularly illegal gold mining.

During the COVID-19 pandemic, the Colombian government's security operations dropped by half, according to a report by the Ideas for Peace Foundation (Fundación Ideas para la Paz - FIP).²⁵² With state authorities increasingly absent, Colombia's Amazonas department began to see a heavy presence of armed groups, particularly around the Putumayo River area, according to Jhon Fredy Valencia, agricultural and environmental secretary for the department.²⁵³

Gunmen shut down villages, confining people to their homes, said an Indigenous leader who spoke on condition of anonymity out of fear of reprisals. At night, boats of all sizes, likely carrying drugs, can be heard along the waterways of Tarapacá.

"There are drugs, there is coca," said the Indigenous leader. "They are in our territory, cutting down forest. There is the invasion of our rivers for mining."

The Indigenous leader said the gunmen who threatened the community called themselves the Sinaloa.²⁵⁴ Human rights officials and the representative of the National Organization of Indigenous Peoples of the Colombian Amazon, said they had also taken declarations from people who had been threatened by representatives of the so-called Sinaloa group.²⁵⁵

The name Sinaloa doesn't appear to have any connection to the notorious Mexican cartel. Instead, it has been used at times by members of the Border Command, a confluence of ex-FARC cells and remnants of the Colombian drug trafficking organization La Constru.²⁵⁶ The Border Command emerged in 2017 in the wake of the dissolution of the FARC's Southern Bloc. Members have described themselves as opposed to injustices committed by FARC commanders, including not sharing wealth with the rank and file.

Ex-FARC Mafia Presence Near Tri-Border of Colombia, Peru, and Brazil



Carolina Ramírez Front

Faction of dissident FARC affiliated with Néstor Gregorio Vera Fernández, alias "Iván Mordisco."

Leader



Yeison Alexis Ojeda Gilon,
alias "**Danilo Alvizú**"



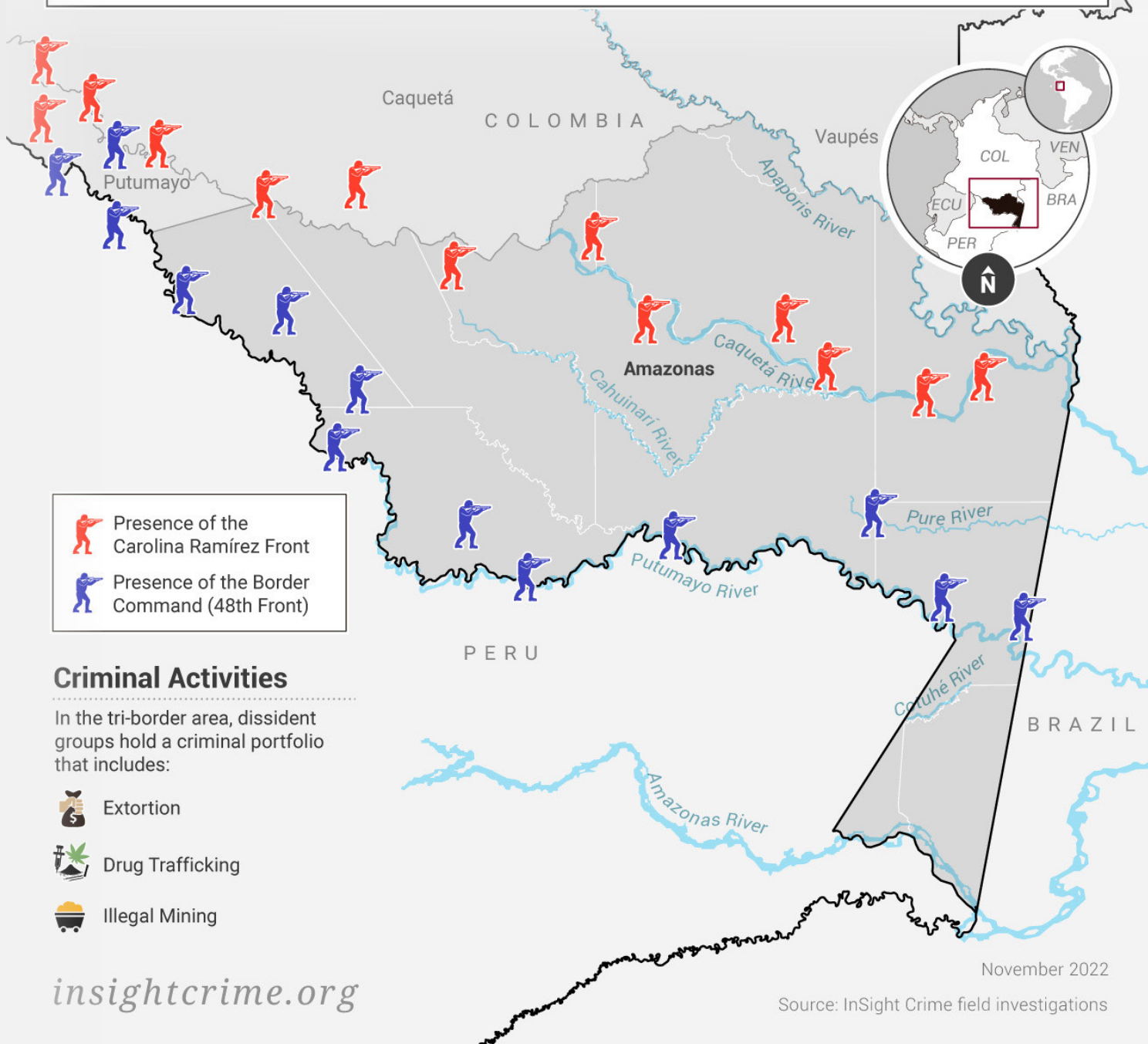
Border Command (48th Front)

Faction of dissident FARC affiliated with the Second Marquetalia, headed by Lucian Marín, alias "Iván Marquez."

Leader



Giovanni Andrés Rojas,
alias "**Araña**"



November 2022

Source: InSight Crime field investigations

According to a report by think tank A la Orilla del Río, which studies Colombia's Amazon region, the Border Command accepts "all types of combatants, regardless of their origin and armed history." Its foot soldiers are paid a monthly stipend of 2 million pesos (about \$450), double the Colombian minimum wage.²⁵⁷

"Nobody knew what they did with all that money," the member told investigators. "Here we decided that those resources go to those who are in the fight."

The Border Command, which the Colombian military has dubbed "residual structure 48," controls much of the corridor along the Putumayo River, according to officials. The group's sway stretches to the western Colombian department of Nariño, a key cocaine production and trafficking center, via Putumayo.²⁵⁸

At some 300-strong, the extent of the Border Command's influence in the deep recesses of Colombia's Amazonas department is unclear.

The human rights official who works with communities in Amazonas said the group operates more like a paramilitary drug clan, extending its reach by recruiting smaller groups and making alliances with Brazilian groups. Social control and youth recruitment are part of its modus operandi.²⁵⁹

"They make every decision about these communities," the human rights official said.

Brazilian Gangs Enter the Rainforest

Weak cross-border governmental cooperation and a lack of customs and migration controls in the tri-border of Colombia, Peru, and Brazil has made it a magnet for Brazil's drug gangs, which feed Latin's America's biggest domestic narcotics market and a cocaine pipeline to Europe.

In Tabatinga, Brazil, graffiti offers some insight into which gangs are dominant. A building at the city's river port is scrawled "Os Crias" and "Voz Da Morte" (Voice of Death). The Crias appear to be a brazen new gang of which little is known. A July 2020 report in *A Crítica*, a news outlet focused on Brazil's Amazonas state, claims that the group is a faction of the Northern Family (Familia do Norte - FDN),²⁶⁰ and that it is allied with Brazil's powerful PCC gang.²⁶¹



Graffiti of “Os Crias,” or “the Crias,” at river port in Tabatinga. Tabatinga, Brazil, August 2022. Photograph by: Seth Robbins

Officials in Colombia confirmed that the Crias splintered from the FDN, but made no mention of the gang’s connection to the PCC.²⁶²

The Crias appear to have displaced the FDN in Tabatinga over the past three years. The group is believed to control street-level drug sales in the tri-border. The gang is also said to be behind an armed assault of the lone bank on Peru’s island of Santa Rosa, and a spate of killings in both Brazil and Colombia.²⁶³

The gang’s wider involvement in the drug trade is unclear. The *A Crítica* report claims that the Crias have made alliances with Colombian and Peruvian groups to control trafficking in the region and to sideline the Red Command, the PCC’s main rival. Renato Sérgio Lima, president of non-governmental organization Brazilian Forum on Public Security (Fórum

Brasileiro de Segurança Pública), said in a June 6, 2022 tweet that the Crias are seeking to control Brazil’s Javari Valley, a large swath of rainforest that lies along the Peruvian border.²⁶⁴

While the upstart gang would only be able to control the critical drug corridor by forming alliances with powerful traffickers and larger criminal groups, its possible spread into the Javari Valley should raise alarm.

Fish poaching, drug running, illegal logging, mining, and ranching have proliferated in the Javari Valley, the second-largest reserve in Brazil and home to several isolated Indigenous groups. A surge in piracy attacking boats moving drugs in the region there has added a dangerous transnational dimension to these environmental crimes.²⁶⁵

For example, the Javari Valley is where British journalist Dom Phillips and the Indigenous advocate Bruno Araújo Pereira were murdered in June 2022 while working on a report.²⁶⁶ Three fishermen were arrested and charged in the crime, including one who confessed and led police to their bodies.

A fourth man, Rubens Villar Coelho, who has admitted to having a commercial relationship with the fishermen, is also under investigation. Arrested on charges of possession of false documents, Coelho -- who goes by the alias "Colômbia" but is from Peru -- is suspected of running an illegal fishing operation, prosecutors say.

The federal police chief for Brazilian Amazonas state, Alexandre Fontes, said at a press conference in Manaus, the state capital, that investigators had concluded Colômbia had ordered the murders.²⁶⁷

"I have no doubt that Colômbia was the mastermind," Fontes said.²⁶⁸

Prior to the killings, Pereira had been investigating illegal fishing and had been seen photographing the poaching of pirarucu, a massive freshwater fish, and tracajá, a river turtle whose meat and eggs are commonly eaten. Both are protected species in the Javari Valley reserve.

According to an associate of Pereira's who knew of his investigation, one of the fishermen charged in the killings, Amarildo da Costa Oliveira, provided a steady supply of poached fish and turtles to Coelho, who sent them to fish markets across the border in Leticia. News outlets have reported that residents and investigators suspect Coelho's involvement in drug trafficking as well.

STATE RESILIENCE



STATE RESILIENCE

Scattered domestic laws and competing interests intersect in the tri-border regions of the Amazon. Commitments to protecting its wilderness change with new political administrations.

Outgoing Brazil President Jair Bolsonaro scaled back efforts to fight illegal logging, ranching, and mining as part of an aggressive campaign to open the Amazon to more commercial development. President-elect Luiz Inácio Lula da Silva, better known as Lula, has promised a complete reversal.

Former Colombian President Iván Duque (2018-2022) put environmental crime at the heart of his security policy, but then did little as deforestation soared. Colombia's current president, Gustavo Petro, has called protecting the Amazon one of the pillars of his agenda.

Peru's President Pedro Castillo vacillated between claiming that quick action is needed to curb deforestation and promoting economic development in the region. His removal and arrest after an attempt to dissolve congress in December 2022 has further increased political chaos in the country, pushing environmental concerns yet further down the list of government priorities.

One country's president -- Venezuela's Nicolás Maduro -- has undone all protections for the country's Amazon region and is benefiting from its pillaging.

Legislative Framework and Political Will by Country

Brazil

Important factors shaping Brazil's legislative framework are its federalism and the outsized role of the Executive branches, both at the state as well as the national levels. The Bolsonaro government aggressively sought to undo protections for Indigenous lands and nature reserves in the region to allow for sanctioned development and mining. These would invariably have brought roads and other infrastructure, often a gateway for large-scale environmental crimes in the Amazon, including mass illegal clearing for cattle and agriculture. Bolsonaro's successor, Lula, who was previously president from 2003 to 2010, vowed during his campaign to fight forest loss. But without significant reforms that lock in protections, a future president could simply reverse Lula's efforts.

Brazil's registered Amazon, the area designated by law as Amazon forest, is about 500 million hectares and makes up about 60% of South America's Amazon wilderness. About a third of Brazil's forests are demarcated as Indigenous lands. After the end of military rule in 1985, a new constitution recognized Indigenous peoples' rights to their land, including that their interests trump those of the government.²⁶⁹

The Alto Rio Negro and Yanomami reserves -- at 18 million hectares combined -- make up most of the land at Brazil's border with Venezuela and Colombia. The Alto Rio Negro reserve, home to 23 tribes, was decreed Indigenous territory in 1998,²⁷⁰ while the Yanomami reserve was decreed such in 1992.²⁷¹ The mass invasion of prospectors has created an environmental and humanitarian disaster in Brazil's Yanomami reserve and Venezuela's Yapacana National Park.

In Yanomami territory, the three Ethno-Environmental Protection Bases closed by the government need to be re-established. A Brazilian federal judge ordered the government to reopen the bases more than four years ago, but it still hasn't done so. The Hutukara Yanomami Association and the ISA have called for the creation of at least three new bases to monitor rivers. Air transport companies that facilitate illegal mining must be shut down, and their owners prosecuted.

The country's constitution mandates that any search for or exploitation of mineral or water resources by the government on Indigenous lands can occur only after consultation with these groups.²⁷² Bolsonaro and allied legislators, however, sought to change the geographic boundaries and/or legal status of existing of protected lands to open them to mining, agriculture, and infrastructure projects by private interests.

In February 2020, Bolsonaro sent to Congress bill PL 191/2020, which allowed for the regulation of mining and other projects on Indigenous Lands.²⁷³ Two years later, the bill was put on hold²⁷⁴ after large-scale protests.²⁷⁵ In March 2023, Lula's government requested Congress to drop the bill.

Local lawmakers have also attempted to ease mining regulations. Legislators in Roraima passed one bill loosening regulations on use of mercury in small-scale mining,²⁷⁶ and another prohibiting the destruction of seized mining equipment.²⁷⁷

Critics say Bolsonaro's rhetoric and refusal to crack down on illegal logging, mining, and ranching spurred deforestation.²⁷⁸ Under Bolsonaro, Brazil's environmental agency (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis — Ibama), in charge of environmental inspection with administrative sanctioning powers, saw its annual budget and personnel slashed.²⁷⁹

During Bolsonaro's first year as president, deforestation reached 9,178 square kilometers, nearly twice that of 2018. For the next two years, forest loss stayed above 8,000 square kilometers. And 2022 was the worst of his administration, with 9,227 square kilometers deforested from January to October, according to Brazil's National Institute for Space Research (Instituto de Pesquisas Espaciais – Inpe).²⁸⁰ Portions of Brazil's Amazon have already tipped from being a net carbon sink to a carbon emitter.²⁸¹

"There is no climate security for the world without a protected Amazon," Lula said in a speech at the COP27 climate summit in Egypt, held by the United Nations (UN) in November 2022.²⁸² "We will do whatever it takes to have zero deforestation and the degradation of our biomes."

Lula has had previous success in reducing deforestation, and much of the international community will support his efforts.²⁸³ After two months in office, the new president started his campaign to fight environmental crime. A task force integrated by police, armed forces, and environmental agencies was deployed to drive illegal miners out of Yanomami land.²⁸⁴ Expelling illegal miners from Yanomami lands could ease the pressures this Indigenous community has suffered for years at the hands of garimpeiros. However, illegal miners are fleeing to the Venezuelan border, and they could soon reach other corners of the Amazon Basin to continue their illegal plunder. Creating alternative development programs on the borders and reinforcing multilateral cooperation is therefore essential to prevent a similar crisis from occurring in other territories.

"It is extremely important not just to shut down a damaging activity like wildcat gold mining or illegal logging, but to provide strong economic opportunities as alternatives to that activity," Daniel Nepstad, president and executive director at the non-profit Earth Innovation, told InSight Crime in a recent interview.²⁸⁵

For instance, Brazil must strengthen programs such as the National Forestry Development Fund (Fundo Nacional de Desenvolvimento Florestal - FNDF), run by the Brazilian Forestry Service (Serviço Florestal Brasileiro - SFB); aim to instigate the development of sustainable forestry activities in Brazil; and promote technological innovation in the forestry sector.²⁸⁶

Lula, however, is also likely to come up against resistance from people who call Brazil's Amazon their backyard. During the 2022 presidential runoff between Lula and Bolsonaro, the latter won eight of the 10 municipalities that saw the most deforestation the previous year, according to a report by the Climate Observatory (Observatório do Clima), a network of Brazilian civil society organizations.²⁸⁷

Venezuela

Desperate to recoup revenues lost from sanctions on petroleum exports, the cash-strapped government of President Maduro has turned from oil to gold and has little political will to protect the environment.

At first, Maduro sought to control mining by developing the Orinoco Mining Arc (Arco Minero del Orinoco - AMO), a crescent-shaped region that runs across three states and is the size of Cuba.²⁸⁸

Created under a new framework for mining in 2016,²⁸⁹ the gold-rich region was the keystone of Maduro's plan to bring in new revenues amid a spiraling economic crisis. After its creation, the president said that billions of dollars in mining deals had been struck with foreign companies.²⁹⁰

But corruption, criminal control of mining areas, and the threat of sanctions on gold caused the little nascent international businesses interest to fade. No formal projects came to fruition.

Illegal miners, however, poured into the arc and beyond.²⁹¹ To oversee the illegal gold rush, the government turned to a morass of proxies, including local officials, Colombian armed groups, and Venezuela's military.²⁹² The Maduro regime and its allies absorb much of the proceeds from illegal gold mining, according to the US Treasury Department.²⁹³

Cristina Vollmer Burelli, the founder of SOS Orinoco, explained this dynamic succinctly in *Americas Quarterly*, a publication focused on Latin America.²⁹⁴ "Civilian and military authorities who respond to Maduro and his clique control access to fuel, mercury, motor pumps, and mining areas -- and profit handily from this control," Burelli wrote.

In 2019, the Treasury Department imposed sanctions on Minerven, Venezuela's state-owned mining company, alleging its involvement in illegal gold operations.²⁹⁵ Minerven smelts gold and is fully aware of its illegal origins, according to an opposition politician in Bolívar who spoke to *InSight Crime* in 2020 on condition of anonymity for security reasons.²⁹⁶

The gold smelted in Minerven furnaces is ultimately transported to the vaults of the Venezuelan Central Bank (Banco Central de Venezuela – BCV) in Caracas, from where it can be sold abroad.²⁹⁷ Venezuelan gold has reportedly been purchased by the government of Turkey,²⁹⁸ and entities in Uganda²⁹⁹ and the United Arab Emirates.³⁰⁰

Manuel Cristopher Figuera, former director of Venezuela's National Intelligence Service (Servicio Bolivariano de Inteligencia Nacional – Sebin), has repeatedly described the system to news outlets as "a criminal enterprise" in which Maduro, his family and other accomplices use the central bank to move gold out of the country.³⁰¹

Paradoxically, Venezuela had pursued some of the earliest efforts to protect its Amazon forests from logging and mining, establishing parks and a "vigorous conservation policy" in Amazonas state in 1978.³⁰² That year, all commercial logging was banned in the Venezuelan Amazon. In 1989, mining activity was also prohibited.³⁰³

As stated in our previous report, “Stolen Amazon: The Roots of Environmental Crime in Five Countries,”³⁰⁴ Venezuela has a legislative framework designed to protect the Amazon. The 2006 “Organic Environmental Law,” provides guidance for managing natural resources and lays out constitutional rights to a safe and ecologically balanced environment.³⁰⁵ The country also has the “Penal Law of the Environment” (Ley Penal del Ambiente) of 2012, a roadmap for how environmental crimes in the nation should be handled.³⁰⁶

Such protections, however, were undermined or effectively dismantled by the Chavez and Maduro governments.³⁰⁷

Since 2011, Venezuela has refused to publish figures on deforestation, collecting them but keeping them from public view, according to a government official who spoke with the environmental news service Mongabay. However, the Venezuelan Ecological Policy Observatory (Observatorio de Ecología Política de Venezuela), a non-governmental organization, calculates that more than a quarter of the country’s forests disappeared between 2016 and 2020.³⁰⁸

According to Global Forest Watch, which monitors forests through satellite data, Venezuela saw one of its highest deforestation spikes in 2021. Some 54,000 hectares were lost, more than double the primary forest lost in 2020.³⁰⁹

Until recently, Venezuela had isolated itself from multilateral platforms that promote cooperation in the Amazon. Diplomatic relations with neighboring countries had also been broken. But the recent rapprochement between Maduro and the new presidents of Brazil and Colombia, may open a new era in the relations and cooperation between Venezuela and both nations.³¹⁰ At the COP27 climate summit in Egypt, Maduro also called on renewed efforts for multilateral cooperation to protect the Amazon.³¹¹

In January 2023, Venezuela’s military carried out six operations to destroy illegal mining equipment in Yapacana National Park, in the border with Colombia.³¹² But with these efforts

and Maduro’s announcement to protect the Amazon amid armed groups and corrupt state elements profiting from illegal mining -- including Maduro himself -- doubts over a real commitment remain.³¹³

Colombia

In the years since its 2016 peace agreement with the FARC, the Colombian government has missed a critical opportunity to bring institutions and law enforcement to areas once governed by the guerrilla force, protracting a longstanding lack of control over large, lawless areas of rainforest.³¹⁴

In 2017, deforestation reached a record yearly high of some 220,000 hectares.³¹⁵

Reining in deforestation has never appeared more difficult. Former President Iván Duque promised to cut the rate in half by the end of his four-year term in August 2022.³¹⁶ Forest loss, however, jumped from some 159,000³¹⁷ hectares in 2019 to 174,000³¹⁸ hectares in 2021, and 2022 looks to be no better. Between January and March, forest loss increased 10% over 2021,³¹⁹ and experts say the upward trend has likely continued.³²⁰

Colombia has several new laws on its books to combat environmental crimes, but it is too early to assess their effectiveness.

In 2021, Colombia criminalized deforestation and the financing of the invasion of ecologically important territories.³²¹ The new laws strengthen the Colombian legal framework, specifying that backers of businesses committing environmental crimes will face stiff penalties.³²² But law enforcement and prosecutors have long failed to unravel networks behind illegal deforestation.³²³ In recent years, campaigns and military interventions -- like Operation Artemisa, which attempted to root out environmental crime in Colombia’s between 2019 and 2022 -- have had little impact in reducing deforestation while disproportionately targeted poor farmers and loggers, the lowest members of the criminal food chain.³²⁴

The director of a non-profit group that works with poor rural communities told Mongabay that she fears Colombian farmers could find themselves increasingly prosecuted under the new laws.³²⁵

Like Lula in Brazil, Colombian President Petro has been outspoken on combating deforestation and protecting the Amazon.³²⁶ During his campaign, he pledged to curb migration into the Amazon and to fight illegal activities that drive deforestation, such as timber clearing and the irregular purchase of land for cattle ranching, a common vehicle for laundering drug money.³²⁷

Petro has put environmental crime as a priority for his security policy, seeking to move away from the “war on drugs” to environmental protection. His efforts to protect the Amazon, though, face the challenges of scarce funds and pushback from agribusiness. Criminal organizations have also long corrupted local politicians and officials to protect their interests.³²⁸

He has sought to revitalize regional cooperation and has repeatedly demanded support from the international community for an approach that differs from that of his predecessors. At the 77th UN General Assembly in September 2022, Petro said that efforts to wipe out coca have brought violence to Colombia’s rainforests, while fossil fuels that contribute to climate change remain protected.³²⁹

“What is more poisonous for humanity, cocaine, coal, or oil?” he asked.

Petro wants to implement a program to pay between \$400 and \$600 a month to peasants who substitute coca crops in exchange for preserving forests,³³⁰ an initiative similar to the Forest Ranger Families Program implemented in the early 2000s, in which peasant families had to commit to substituting illicit crops to receive benefits from development programs.³³¹

At the COP27 climate summit, Petro said that that his country intends to set aside \$200 million per year over the next two decades to protect the Amazon.³³²

Calling on others to contribute, he advocated for the “opening of a fund” sustained by the donations of companies and foreign governments.³³³

Peru

Peru has a broad legal framework that protects its Amazon region. Although some different instruments and provisions regulate mining, logging, and wildlife activities, the law that covers the environmental mandate in Peru is the General Law on the Environment of 2005.³³⁴

The law aims to regulate the protection and conservation of the environment, natural resources, and environmental damage, among others.³³⁵ Likewise, it has also created various instruments that expand the capacity of the Ministry of the Environment (Ministerio del Ambiente), the highest regulatory body for these matters at the national level.³³⁶

Peru’s efforts are well-intentioned but ineffective. In late 2021, Peru’s government created the Yavari Tapiche Reserve, a protected area of 1.1 million hectares near the Peru-Brazil border.³³⁷ While the reserve’s creation was a major step nearly twenty years in the making, government agencies have yet to annul and remove 47 forestry concessions illegally granted there by the Loreto government, according to the Interethnic Association for the Development of the Peruvian Rainforest (Asociación Interétnica de Desarrollo de la Selva Peruana - Aidesep).³³⁸

Such ineffectiveness characterizes much of Peru’s attempts to protect its Amazon from illegal deforestation. In 2015, Peru ratified the National Forestry and Wildlife Law, an overarching statute regulating timber harvesting.³³⁹ A year earlier the government pledged to certify that wood bought and sold in the country came from legal sources. The government also pledged in its National

Multisectoral Strategy to Combat Illegal Logging (La Estrategia Nacional Multisectorial de Lucha contra la Tala Ilegal - ENLTI 2021-2025) to create a forest surveillance system and a forensic laboratory for identifying timber, and to better coordinate government agencies tasked with tracking timber transportation.³⁴⁰

Despite all this, Peru's Amazon region saw its worst deforestation of the last two decades in 2020, when more than 203,000 hectares were destroyed, much of it from illegal logging.³⁴¹ And Peru's congressional agricultural commission is seeking to modify the forestry law to allow people to farm and ranch on their lands without consulting the Environmental Ministry first, allowing for the easy destruction of potentially sensitive forests.³⁴² Chronic political instability in the country means that the situation is unlikely to improve in the short term.

In Peru, a new bill has caused concerns over environmental defenders and civil society organizations. The legislative initiative seeks to amend the Law for the Protection of Indigenous or Native Peoples in Isolation and in a Situation of Initial Contact (Ley para la Protección de Pueblos Indígenas u Originarios en Situación de Aislamiento y en Situación de Contacto Inicial – PIACI).³⁴³

The proposal would allow regional governments to decide on the creation of reserves within their territories, a capacity currently reserved for the national government.³⁴⁴ According to a representative of the Regional Organization of Indigenous peoples of the East (Organización Regional de los Pueblos Indígenas del Oriente - ORPIO), this would put isolated Indigenous communities living in these territories at risk. They would be at the mercy of forestry and agricultural activities in their territories, driven by regional administrations and agribusinesses. And all the Indigenous reserves recognized up to now, would be immediately evaluated in order to determine their continuity, revocation or extinction.³⁴⁵

Joint Agreements

Joint agreements among the tri-border countries and international treaties exist, but they are flouted. Lack of state presence in the regions means that there is little to no deterrence for the criminals. To make matters more complex, the role ascribed to military forces stationed near border areas to act on transnational criminality, including environmental crimes, varies according to the country. Overall, formal legal mandate or clearly delineated competency and capacity to dismantle trans-border environmental crime are more the exception than the rule.³⁴⁶

Other barriers to effectiveness in multilateral cooperation are the unbalanced commitment of the different nations to protecting the environment, a lack of permanent communication channels, and the geographic challenges of the region. Finally, the funding needs for both law enforcement and economic livelihoods associated with effective protection of the environment exceed any national budgets and require international assistance.

Venezuela, Colombia, Brazil, and Peru are all among the eight countries that make up the Amazon Cooperation Treaty Organization (ACTO), which aims to bring about sustainable development within the Amazon region.³⁴⁷ While its member countries are currently drafting a new Strategic Cooperation Agenda for the 2021-30 period,³⁴⁸ several factors may limit the organization's ability to achieve its goals.

Previous projects have aimed to strengthen institutional and civilian efforts around the management, handling, and monitoring of water and forest resources, as well as species of flora and fauna.³⁴⁹ However, the success of these projects was limited thanks to a lack of financial resources and slow decision making within ACTO. So far, fighting environmental crime has not featured among the organization's key priorities. Additionally, the countries involved have had to weigh potential economic development against environmental protections, which has prevented impactful collaborative efforts to tackle environmental crime.³⁵⁰

Venezuela, Brazil, Colombia, and Peru have all signed the Minamata Convention, which seeks to curb mining-related mercury pollution, though Venezuela has yet to ratify it. The treaty has so far shown little effect.³⁵¹

During Colombian President Petro's first 100 days in office, legislators ratified the 2018 Escazú Agreement,³⁵² a regional treaty that is designed to protect environmental defenders and requires member states to provide public access to environmental information.³⁵³ Petro signed the agreement before COP 27, fulfilling one of his campaign promises.³⁵⁴ Colombia's congress had failed to ratify the agreement, adopted in 2018, for more than three years.³⁵⁵

However, Peru and Brazil³⁵⁶ have so far refused to ratify the agreement, while Venezuela has not even signed it.³⁵⁷

The four countries have signed and ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The treaty protects endangered flora and fauna species from international legal and illegal trade.³⁵⁸ However, authorities' knowledge of how to apply this tool still needs to improve in the tri-border zones, limiting its effectiveness.

Presidents and diplomats from all these countries have gathered in Leticia over the years to draw up agreements for protecting the Amazon. One even bears the city's name. The 2019 Leticia Pact – whose seven signatories include Brazil, Colombia, and Peru – sought to expand regional cooperation to tackle deforestation.³⁵⁹ But experts told Reuters in 2021 that the pact had largely failed due to limited funding, competing interests, and an inability to conduct on-the-ground actions.³⁶⁰ Venezuela was not invited to the summit.

In a shift in foreign policy, Colombian President Petro and Venezuelan President Maduro have restored the relationship between the two countries, reopening borders, re-establishing diplomatic ties, and holding talks.³⁶¹ At the COP27 meeting in November 2022, both presidents stood together and committed to fighting climate change and protect the

Amazon -- a major reversal for Maduro who had not shown any prior willingness to join such efforts, though it is likely nothing more than lip service.³⁶²

Lula has also worked to restore bilateral relations with Venezuela. "We are going to re-establish the civilized relationship between two autonomous, free, and independent states," Lula said at the summit the Community of Latin American and Caribbean States (Comunidad de Estados Latinoamericanos y Caribeños - CELAC) after his electoral victory.³⁶³

Both Petro and Lula proposed to create an unprecedented Amazon summit that is intended to be held in Brazil in August 2023.³⁶⁴ This event would be organized by ACTO, adding institutional weight to take action on the Amazon.³⁶⁵

Civil Society Groups and Indigenous Communities

Both civil society and Indigenous communities play critical roles in documenting deforestation and environmental crimes.

Monitoring the Amazon is a daunting task. But non-governmental organizations, news outlets, and universities have teamed up to track deforestation from illegal mining operations. This is often accomplished through satellite data, mapping technology, and algorithms to track forest loss. Examples of such projects include, MapBiomass,³⁶⁶ the Pulitzer Center's Amazon Mining Watch,³⁶⁷ and Monitoring of the Andean Amazon Project (MAAP),³⁶⁸ RAISG,³⁶⁹ and many more.

Better detection and imaging of illegal mining have drawn attention to the devastation occurring in the Amazon, including its tri-border regions. The monitoring also makes clear where enforcement is lacking.

News outlets dedicated to conducting investigations on the Amazon, such as InfoAmazonia,³⁷⁰ Repórter Brasil,³⁷¹ and more recently Sumaúma³⁷² have revealed the

sophistication of illegal mining in the Yanomami reserve, and how gold mined there is laundered. Colombia's national natural parks agency, in alliance with different organizations have created the program "Parques Cómo Vamos," meaning "Parks How Are We Going."³⁷³ This project is part of the National Natural Parks System (Sistema de Parques Naturales – SPNN) and aims to produce detailed information on environmental threats, conservation status, and governance in national parks.³⁷⁴

In Venezuela, watchdog group SOS Orinoco has exposed illegal mining and deforestation in the country's Amazon. Comprising a consortium of experts who work anonymously, the group has documented the presence of organized crime groups in mining operations in the Venezuelan states of Bolívar and Amazonas.³⁷⁵ In Peru, regular investigations and reporting on environmental crimes in the Amazon region comes from news outlets such as Ojo Público,³⁷⁶ and organizations such as Proética,³⁷⁷ the Peruvian chapter of Transparency International, the Peruvian Society of Environmental Law (Sociedad Peruana de Derecho Ambiental - SPDA),³⁷⁸ and the Environmental Investigation Agency (EIA).³⁷⁹ Representatives of ORPIO, which brings together more than 500 native communities, have raised their voices against the modification of PIACI Law, which could promote environmental crimes.³⁸⁰

The devastating effects of illegal mining on the Yanomami people have also been well documented by civil society groups, academics, and the Yanomami themselves.³⁸¹ Reports have highlighted medical issues, such as mercury exposure and malaria outbreaks; abuses of women, such as rape; alcohol and drug addiction; and attacks on the Yanomami, who have been killed in confrontations with illegal miners and other criminal actors.³⁸²

The trouble is that Indigenous communities and environmental activists also are often left alone to defend the Amazon in its tri-border regions. The dangers of confronting illegal miners and other criminal actors make them vulnerable to threats, attacks, and targeted killings.

Security and Criminal Justice

Authorities have scattered and unbalanced presences in the countries of the Amazon's tri-border regions.

Brazil's border regions are patrolled by a mix of military units: the air force's 7th Regional Air Command; a naval base belonging to the 6th Naval District;³⁸³ and the Amazon military command, composed of three jungle infantry brigades.³⁸⁴

Brazil also has three police forces. The Federal Police is in charge of safeguarding federal laws and patrolling airports and borders.³⁸⁵ Military police forces depend on the governorates and are responsible for patrolling and responding to emergency calls. They are subordinate to the governors of each state.³⁸⁶ When called upon by the Federal Government, members of state police forces can act as part of the National Public Security Force (Força Nacional de Segurança Pública). Finally, the Civil Police are state police forces. They carry out detective work, forensics, and criminal investigation, acting as a bureau of investigation for their state.³⁸⁷

However, three government security posts were shut down in Yanomami territory between 2015 and 2016 for budgetary reasons, including the Korekorema BAPE, which, as mentioned earlier, controlled access to the Uraricoera River.³⁸⁸

Indigenous communities have taken to pushing back against the spread of illegal mining in their lands, often by burning rafts and destroying equipment. However, as discussed earlier in this report, miners have retaliated, shooting at Yanomami who have attempted to block them from traveling.³⁸⁹ After gunmen on a speedboat shot at Yanomami in May 2021, the government authorized the employment of the National Public Security Force to protect the reserve for only 90 days, while the illegal miners maintain a permanent presence there.³⁹⁰ This episode highlights the geographic challenges of the tri-border areas, where

police operations face physical and budgetary obstacles to operate in the long term. This translates into challenges in coordinating joint actions between the countries.

Prosecutors and other authorities have carried out operations against illegal mining in the Yanomami reserve, raiding companies and seizing gold, planes, and equipment. But they face hurdles, and investigations can languish. According to the *New York Times*, a Brazilian court rejected multiple requests by the federal police to order the arrest of Martins de Mello, the air transport businessman whose aircraft were seized due to their alleged use in illegal mining operations.³⁹¹

In response to multiple attacks to the Yanomami people by *garimpeiros*, in February 2023 the new Brazilian government deployed a task force to protect the Yanomami communities and expel illegal miners.³⁹²

Venezuela's security forces have actively participated in illegal mining operations. According to SOS Orinoco, a portion of the gold mined in the Yacapana reserve is handed over to the head of the military in Puerto Ayacucho.³⁹³ Military actions against illegal mining operations are few and for show. The Venezuelan military maintains a base on the reserve meant to house around 1,500 troops tasked with combating illegal mining. But only a handful of soldiers are currently stationed there, showcasing the military's ineffectiveness -- and likely complicity -- in the illegal activities.³⁹⁴

In Colombia, three army battalions are based in the Venezuela-Brazil border regions.³⁹⁵ The navy also has a battalion.³⁹⁶ The armed forces have conducted campaigns against illegal mining in the tri-border region, such as operation Anostomus in 2015.³⁹⁷ Critics have noted that the military's strategy of massive raids to combat environmental crimes tends to result in the capture of only low-level actors, such as miners themselves.³⁹⁸

Peru relies on its national police to take the lead with support from the military.³⁹⁹ The navy and the air force also participate in the operations as support. More particularly, the responsibilities of border surveillance in the tri-border concern the army's 5th Division.⁴⁰⁰ Peruvian security forces have played an active role in the fight against environmental crime, especially illegal gold mining. However, these efforts have been focused far from the tri-border, in the department of Madre de Dios. The department lies on eastern Peru's border with Brazil, one of the main hubs for illegal gold mining in Peru.⁴⁰¹

Most of the operations carried out in both tri-border regions are aimed at stopping illegal mining, partly because this is the most prevalent crime in both regions. Also, because throughout the tri-border regions, troops and law enforcement have been unable to maintain the sustained presence in remote environments needed to combat environmental crimes.

An official in the mayor's office in Santa Rosa, Peru's island town on the tri-border, said that prosecutors, forestry, mining, and environmental protection authorities are located far from the area.⁴⁰²

Colombian and Peruvian authorities, for example, have come together to devise strategies to stop timber trafficking in the border,⁴⁰³ but larger operations -- such as Operation Amazonas that resulted in largest seizure of illegally-sourced timber in Peru's history -- have yet to materialize in the tri-border area.⁴⁰⁴

Colombia's park rangers have been driven from their posts in Amazonas by threats from armed groups. Rangers must also navigate complicated waterways. To reach protected areas of the Puré River near the Brazil border, patrols must traverse 600 kilometers, a journey that typically takes four days.⁴⁰⁵

Brazil's environmental protection agency has not had an office in Tabatinga since 2018.⁴⁰⁶ Hugo Loss, director of IBAMA's Environmental Technical Division between 2018 and 2019, said that such a base is critical in the tri-border due to the complexity of crimes there.⁴⁰⁷

CONCLUSIONS AND OPPORTUNITIES FOR INTERVENTION

A spate of criminal actors and dynamics converges in these tri-border regions, creating a unique set of challenges in combating environmental crime.

First, the regions are a nexus for increasing amounts of cocaine production and trafficking that will exacerbate existing environmental crimes. With the FARC's departure, criminal groups, old and new, have emerged to take control of the Amazon drug routes. Where the FARC had negotiated with local and Indigenous communities, these new groups have shown themselves willing to profit from any and all illicit activities without regard for locals. The groups' prevalence and growing power are likely to be catalysts for more environmental crime.

Second, the crimes committed in the region are unconstrained by national borders, and in fact aided by gaps in national enforcement. Rafts operated by illegal miners move along shared waterways, particularly those that cut across Brazil, Colombia, and Peru, making the Peruvian city of Iquitos a key Amazon hub for illicit economies. Sawmills in Peru's Islandia process illegal timber that is sold in Leticia, Colombia and Tabatinga, Brazil. Colombian armed groups have migrated to Venezuela's Yacapana National Park and surrounding areas to control illegal gold mining. Gold mined there is spirited to Brazil and laundered. Wildlife trafficking is also transnational.

Third, deforestation in the tri-border regions is less than seen in other parts of the Amazon, but worsening. The difficulty of transport, particularly with the lack of roads, has likely kept the most devastating types of environmental crime, such as land clearing for cattle, from taking hold. But the stage is set for

this along with other prevalent environmental crimes. Illegal logging, for example, appears to be increasing around Peru's Yavarí and Colombia's Tarapacá regions. In the Brazilian state of Roraima, home to part of the Yanomami reserve, wildfires have been linked to land trafficking schemes.⁴⁰⁸

There are steps, however, that can be taken now to stop the advance of environmental crimes in this sensitive territory, taking advantage of a uniquely positive political moment in the region.

Listen to and Prioritize Indigenous Communities

When civil society, non-governmental organizations, and conservation groups focus on the protection of the rainforest, the Indigenous communities of the Amazon are often forgotten or seen solely as victims. But they are the first line of defense against deforestation.

A statement by Colombian Indigenous leaders at a July 2022 meeting in Leticia highlighted the importance of their roles as environmental authorities in their territories. The leaders called for the authorities to respect their territories within a plurinational state with inter-cultural policies, and to be included in environmental management and land use plans as well as emerging actions to confront illegal mining.⁴⁰⁹ Under the new government, Brazilian indigenous groups have secured some important wins. A newly created Indigenous Peoples Ministry is headed by a female indigenous leader, Sonia Guajajara, and another female indigenous leader, Joenia Wapichana (the first Indigenous woman elected to Brazil's Congress) was selected to preside over the Indigenous affairs agency, Funai.

Governments should prioritize providing basic services to these communities. In particular, schools in many Indigenous areas need both funding and teachers. Weaknesses in education can lead to a lack of opportunities which leaves children and adolescents vulnerable to recruitment by criminal groups. Security must increase, and Indigenous people need to be able to trust that they will be protected if they speak to troops or law enforcement.

At a national scale, promotion of an inclusive and inter-cultural state is essential to protecting Indigenous rights and land designations, which serve as bulwarks against large-scale deforestation in the Amazon. For example, rates of native vegetation loss between 2005 and 2012 were 17 times lower in Indigenous territories than in unprotected areas of Brazil's Amazon, according to a study published in March 2022 in the journal *Biological Conservation*.⁴¹⁰ And according to a survey by MapBiomas, less than 1% of deforestation took place on Indigenous Lands between 1985 to 2020.⁴¹¹

Increase Overall State Presence

The tri-border regions have an historic problem of weak governance, exacerbated by COVID-19. It is time for the state to push back on armed groups that have become the de facto authority. The need is for both a sustained presence by security forces and a greater state role overall.

National governments, judicial authorities, and Indigenous communities should come together to create a system of formal and inclusive governance in these regions. Greater state presence has to rest on progress on foundational legal issues, such as land titling, coherent forms of governance, and legal incorporation that reaches the outermost local levels. In Colombia, for example, without local government, vast tracts of non-municipalized areas in the region are a political no-man's land.⁴¹² In Colombia's Amazonas' non-municipalized areas were created by Colombia's Constitutional Court in 1991 as an intermediary land designation until they could either become municipalities or be annexed by the existing ones, Leticia and Puerto Nariño. This has not yet occurred.⁴¹³

Land rights, titling, and management are also key in Brazilian environmental crime dynamics. Large areas of the Brazilian Amazon are undesignated public forest land (Florestas Públicas Não-Destinadas). These areas remain extremely vulnerable to land grabbing and deforestation. Yet, due to their undesignated status, they remain largely unprotected, receiving insufficient attention from state authorities.⁴¹⁴

Plug Legal Loopholes

Each of the nations cited should ensure that their domestic legislation is as strong as possible to govern behavior that leads to deforestation, illegal use of mercury for gold mining, and trafficking in timber and wildlife. Some possible areas of focus could include strengthening firearms regulations in order to use weapons charges to hamper criminal and gang activity, as cited earlier in the case of Brazilian mine operator Dona Iris. Another tactic would be to focus on those providing aviation support to gold miners through unlicensed companies. Better regulation of mercury importation through cooperation with the private sector is essential to protect the environment and health of those living in the region. And stricter regulations and controls on wood imports and exports are critical to prevent the sale of illegal timber in the tri-border regions.

Focus on Economic Needs

The state must ensure that people's basic needs are met, despite logistical difficulties inherent to this undeveloped area, to keep armed groups from filling this void. For example, in one locality, school meals and fuel were not always reaching their communities and gunmen who control communities have ingratiated themselves through the sale of produce, gasoline, and rice. Coca plant eradication will not provide a solution; appropriate options such as crop substitution or eco-tourism need to be developed as alternatives.⁴¹⁵ The UN Office of Drugs and Crime supported many alternative development schemes over the past twenty-five years, such as market access support for licit products and fruit tree cultivation, and its research indicates

that alternative development must occur within a holistic state and international effort.⁴¹⁶ The new push for bioeconomy in the region offers many opportunities for the Amazon, but the new forest economy must be inclusive and responsive to local populations' needs.

Bring Focus and Resources to Multilateral Treaties

Multilateral treaties are no panacea, but they can help bridge electoral changes by making non-compliance more internationally visible and politically costly. As has been demonstrated vividly, most recently in both Brazil and Colombia, changes in political regimes and presidential priorities subject many key policies to advances and reversals on a political timetable. Peru's chronic instability has also damaged its ability to carry out policies and operations, and Venezuela's regime has disregarded most of its political obligations.

The many regional agreements that already exist need full ratification, funding, and implementation. With respect to ACTO, the member countries must unite in helping achieve its aims, in particular providing, or locating through multilateral funds and development banks, sufficient financial resources to boost international collaboration and reduce the level of impunity enjoyed by crime groups operating in border regions.

To improve the effectiveness of the Escazú Agreement and protect environmental leaders who are being murdered with impunity, Brazil and Peru need to follow in the footsteps of Colombia, which ratified the agreement in 2022.⁴¹⁷ Venezuelan President Maduro's statements at COP 27 to protect the Amazon also need to be more than just lip service. A first step would be for Venezuela to join and implement the Escazú Agreement, which would help bring transparency to environmental information and require the country to respond to difficult questions about deforestation occurring in its Amazon.⁴¹⁸

Improve Operational Cooperation Among Legal Authorities

Disrupting illegal activities requires joint surveillance and interdiction efforts by military and law enforcement in all the tri-border countries, starting with the establishment of customs and migration control points along the borders where none currently exist.

While there is considerable focus on military efforts, more attention needs to be paid to police and judicial cooperation and efforts to bring sanctions not only to those found trafficking but also to those who profit financially. Coordinated investigations, criminal trials, and extradition agreements are essential. Sharing intelligence and financial crime investigations are especially important with respect to gold mining. It is difficult but not impossible to determine a nexus of those who are really benefiting from the trade far beyond the Amazon region.

Each kind of environmental crime requires a different mix of law enforcement actions. With respect to mining, coordinated actions must be taken to impede dredges from using international boundaries to hide, for example through the creation of constant patrols or permanent military posts along major rivers used by illegal dredging rafts. The use of drones, a cheaper alternative to permanent patrols, could allow for specific action against identified timber and wildlife trafficking targets, and satellite technology also can overcome shortfalls in the regional governments' ability to monitor remote, heavily forested areas. Better inspection of the sawmills in Peru's Islandia is needed to prevent the processing and laundering of illegal wood from Peru and neighboring countries, and tracking systems should be put in place to prove that the timber processed there is legally harvested.

Finally, national authorities should take extra legal efforts, and seek international funding, to protect and conserve national parks and reserves and expel criminals found there.

End notes

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Rio de Janeiro - RJ - Brazil
Tel/Fax: +55 (21) 3496-2114
contato@igarape.org.br
facebook.com/institutoigarape
twitter.com/igarape_org
instagram.com/igarape_org

www.igarape.org.br

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info@insightcrime.org
facebook.com/InSightCrime
twitter.com/insightcrime

www.insightcrime.org

Authors

Jeremy McDermott
Project Director

María Fernanda Ramírez
Project Manager InSight Crime

Seth Robbins and Juan Diego Cárdenas
Lead Investigators InSight Crime

Annie Pforzheimer
Additional reporting

Sean Doherty
Contributed with open-source research

Layout and design

**Ana Isabel Rico, Juan José Restrepo and
María Isabel Gaviria**
Graphic Design InSight Crime

Elisa Roldán
Creative Direction InSight Crime

Raphael Durão
Creative Coordinator Igarapé Institute

André Guttierrez
Graphic Design and Layout Igarapé Institute

Translation

**Diego García, María Luisa Valencia and
Marina Vargas.**

Editing process

**Seth Robbins, Peter Appleby and
Juan Diego Posada**
Editors InSight Crime

Mike LaSusa
Deputy Director of Content InSight Crime

Review

Melina Risso
Research Director Igarapé Institute

Laura Waisbich and Katherine Aguirre
Researchers Igarapé Institute

Carolina Andrade
Adviser Climate and Security Program Igarapé
Institute

Communication

Eliane Azevedo
Communication Manager Igarapé Institute

Ana Carolina Duccini
Communications Coordinator Igarapé Institute



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